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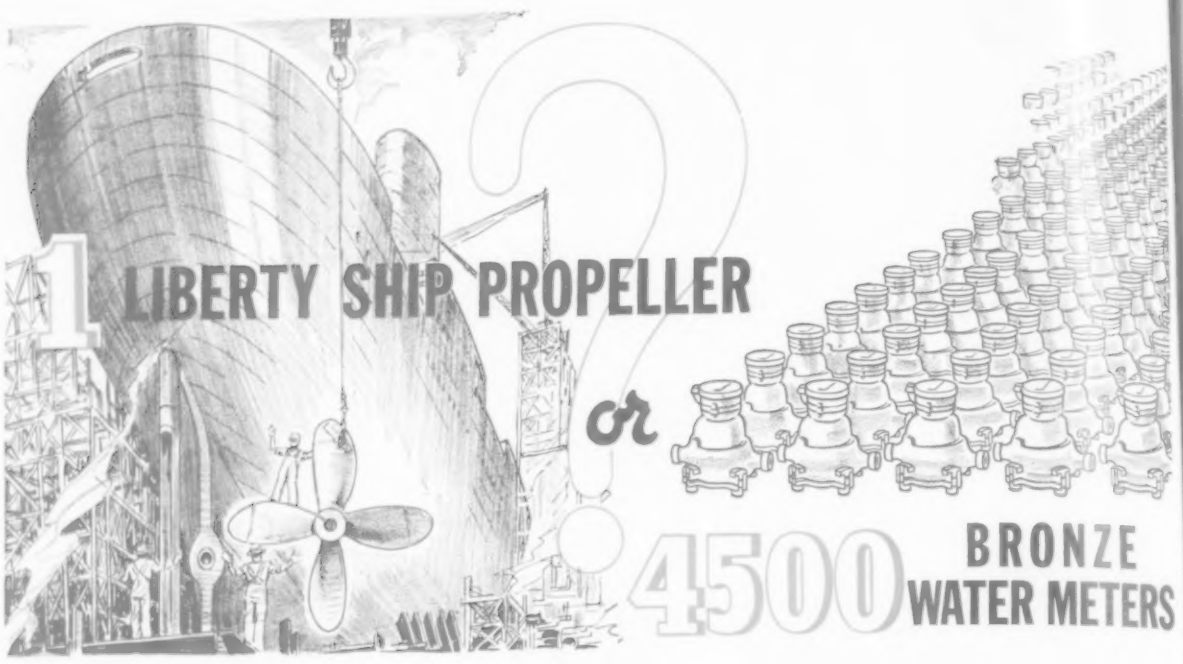

THE bronze propeller on one of our new Liberty ships weighs 15 tons. Approximately the same amount of bronze would be required to make 4500 water meter cases. Many additional tons of copper alloys are required for other operating parts in these vessels. We in the meter industry can and are using substitutes—our Merchant Marine and Armed Forces cannot, without materially affecting the efficiency of their efforts.

Top value in war model meters will be found in the Empire Victory and Pittsburgh Ironside. Both have cast iron cases that are treated and coated to resist rust and corrosion. Both are fitted with the Pittsburgh-National developed molded glass register box. There has been no sacrifice in the design or construction of the proven inner working mechanisms. When the emergency is over, these meters can be reassembled with bronze cases if desired. Buy them with full confidence in their ability to measure accurately and serve faithfully.

DON'T REPLACE WHEN YOU CAN REPAIR. Our country's interests come first. An intelligent program of meter reconditioning and maintenance can, in many cases, largely supplant the need for new meters. All Pittsburgh-National Meters are economical to repair and replacement part stocks are adequate.

Plan Now to Attend the A. W. W. A. Conference on War Winning Water Works Operations, Cleveland, Ohio, June 16-18, 1943

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THE PITTSBURGH IRONSIDE METER

THE *Empire* VICTORY METER

Built For The Duration—But to Last For Years!

INVEST TODAY IN BONDS FOR VICTORY

PITTSBURGH-NATIONAL *Water Meters*

Airplane, City Planning, and World Peace

Adapting Our Cities to Air Transportation

A PREDICTION that "fast, long-distance air transportation is bound to shape the destiny of settlements much as highways, railways, sailing vessels, and steamers did," is made by Waldemar Kaempffert, Science Editor of *The New York Times* in "The Airplane and Tomorrow's World," issued April 26 by the Public Affairs Committee, of New York.* "Every city is now a possible port of call for planes that may come from any part of the world," points out Mr. Kaempffert. Discussing the effect that the airplane seems destined to have on the planning and replanning of American cities, the author says:

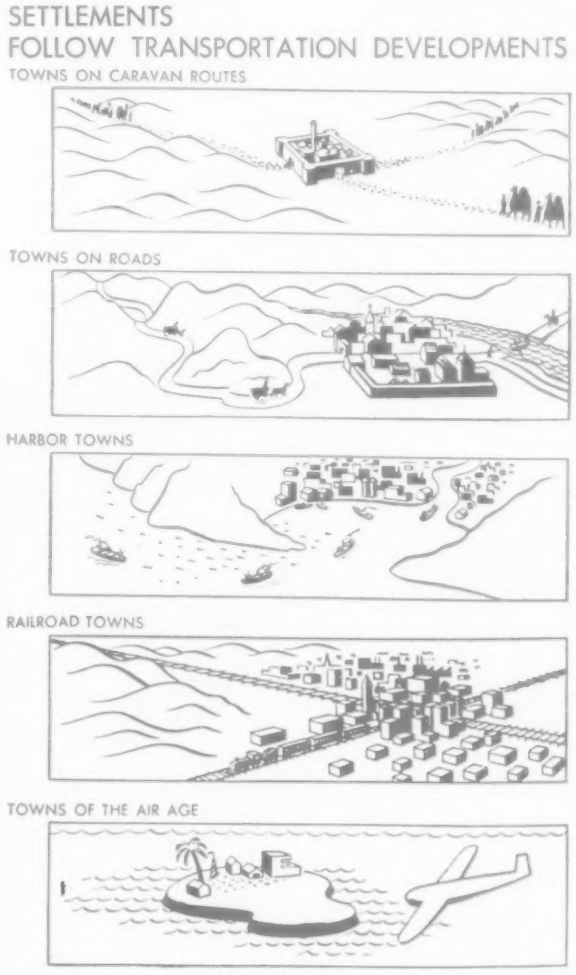
"If more freight and passengers are to be carried in the United States by plane, it is evident that business centers and airports must be more closely linked than they are now. Two cities may be separated by a flight of only four hours, but an hour or more may be frittered away in traveling to and from an airport by automobile. The airport of St. Louis is located 17 miles from the business district, and that of Los Angeles 15 miles; the national average is 7 or 8 miles.

"It may be impossible to adapt an enormous city like New York, London, or Paris, to the airplane. But little towns destined to become essential ports of call will plan for the future. The airport will therefore be the center of the community—a vast open space surrounded by hotels and business structures. There must be radio beacons, markers, meteorological offices, and special machines to load and unload cargo more speedily than is now considered necessary for railway box cars. The cost will be heavy, yet not so heavy as that of railway tracks, signal systems, stations, and terminals. New skills will be demanded, and more employment will be created. It has been estimated that the air transportation of perishable goods alone, and the necessary ground crews, offices, and other facilities will require as many men and women as are now employed by our railways. Automobile history will be repeated in the sense that thousands of service stations and tens of thousands of specially trained mechanics will be required to preen the wings of a nation that has taken to the air.

The Helicopter

"The helicopter, which can rise vertically from the ground and even hover over a spot, presents different problems. It will probably suit many who live in cities of metropolitan size and who would rather whir up from their own backyards than travel an hour to an outlying airport. But the backyards will have to be larger than a pocket handkerchief. Probably apartment house roofs will be so designed that it will be easy to rise from their flat and ample areas. Upper stories could easily become hangars, with elevators to lift the helicopters to the roof. Just as whole city buildings now serve as garages, so we may expect fifteen- and twenty-story hangars in cities to receive the helicopters that whir in from the country. The architect will be required to make more of the roof than he ever did, and the authorities will be presented with the problem of devising a system of markers to guide helicopters and private planes to their destinations. Traffic will probably have to be regulated by aerial policemen to prevent collisions.

"With mass-produced helicopters and family airplanes costing no more than automobiles, with trains of gliders delivering perishable goods or urgently needed express packages to thousands of small communities, the airport will take the place of the traditional public square. The communiting radius is certain to expand from the present 30 or 40 miles to 150. Because of this decentralizing influence, metropolitan real estate values may be expected to decline on the average and rural values to rise."



Isolation and the Airplane Cannot Go Together

Important sections of "The Airplane and Tomorrow's World" are devoted to a forthright discussion of the airplane as a hindrance or aid to friendly international relations. Here are significant paragraphs:

"The airplane is exercising the social and economic influence described, not as the result of a natural development of technology, but in spite of a deep nationalistic resistance to free intercourse. Whether or not the pledges of the Atlantic Charter are to become realities, whether or not we shall evolve politically from the nation to the world federation, and eventually to the world state, depends on more factors than aerial transportation. Yet, a vehicle which in less than a generation will carry several hundred tons of goods or several hundred passengers half around the world on a single charge of fuel, is bound to have an influence. It drives home the new importance of friendly international relations and demands a political outlook that goes beyond country or continent. . . .

"No proposal for the abolition of war can ignore the airplane, and no proposal for the internationalization of commercial aviation can succeed unless there is all-round and not merely partial disarmament. With new aerial giants in the offing, giants that bring India closer to the United States than Boston was to Washington in stage-coach days, the planet

(*Concluded on page 67*)

* See page 101 of this issue.

NEW—

WORLDS TO CONQUER

In the present war emergency, the service provided by Layne has been of inestimable value. Thousands of highly efficient well water systems for military, naval, munition and war material needs have been constructed in unbelievably short periods of time.

But over tomorrow's horizon—in the post-war period—there are new worlds to conquer. Municipal and industrial well water development projects now being held in abeyance to save war materials and manpower, will be rushed to completion.

When peace returns, the Layne organization will be ready to provide an incomparable service. There will be pumps of improved design to further increase high efficiency, tougher materials to add more years of long life, unmatched manufacturing facilities to speed production and hundreds of thoroughly trained men for field and service duty.

It will be Layne who has the demonstrated skill, the wealth of experience and the most complete facilities for building the world's finest Well Water Systems and Pumps. For literature, write, Layne & Bowler, Inc., General Offices, Memphis, Tenn.

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DEEP WELL PUMPS

BUILDERS OF WELL WATER SYSTEMS FOR EVERY INDUSTRIAL AND MUNICIPAL NEED

Our Municipal Notebook

Truth about Sprinklers

THE effectiveness of automatic sprinklers in fire extinguishment has long been recognized by fire protection engineers. Not all municipal officials, however, appreciate the value of this form of protection.

There is ample evidence to substantiate the effectiveness of automatic sprinklers. Statistics of the fire record department of the National Fire Protection Association over a long period of years indicate a most satisfactory performance of automatic sprinklers in all locations.

It has been estimated that about 50 billion dollars worth of property in the United States is protected by automatic sprinklers and that the fire loss on such property is not more than 10 per cent of what it would have been without sprinkler protection.

Figures available on the fire loss in manufacturing and mercantile properties of the better class show a loss of 2 to 3 cents per hundred dollars of property value. These figures indicate a saving from fire loss of approximately 200 million dollars a year. In addition to this saving, there is a consequent saving to business in freedom from interruption as well as a saving due to reduction of conflagration and exposure losses.

Safeguard of Life

The experience of automatic sprinkler protection in safeguarding life is even more remarkable than its record in the protection of property. Automatic sprinklers have proved most effective in safeguarding life from fire in buildings where large numbers of people work or congregate, also in hospitals, schools, institutions, etc.

The large reduction in insurance premiums on buildings equipped with automatic sprinklers has often been the deciding factor in such installations. Oftentimes the annual saving is sufficient to pay for the sprinkler system in a few years.

The National Fire Protection Association has issued a proposed automatic sprinkler ordinance which may be used as a guide to municipal officials wishing to adopt such legislation in their cities. This ordinance, where adopted, is intended to supplement any existing building code or fire-prevention ordinance provisions. The ordinance includes requirements for sprinklers in such occupancies as public garages, multi-family houses and dormitories, theatres and halls, hospital and other institutional buildings, schools and public buildings.

Municipal officials can render a distinct public service to their communities by doing all in their power to encourage and promote the installation of automatic sprinklers in the various buildings of their municipalities, particularly buildings where people congregate, such as churches, schools, theatres, night clubs, etc. It is likewise important that our vital war industries be protected from fire and the provision of automatic sprinklers in such plants is a most desirable recommendation. Fire-prevention measures are more necessary now than ever, as a building once destroyed by fire is difficult to replace due to lack of materials and shortage of manpower. It is also necessary to keep industrial plants producing.

After every severe fire, the mayor, city manager, city engineer, fire chief, fire prevention head, and building inspector should investigate and analyze. A goodly number of times out of ten, it may be seen that a sprinkler system would have saved property and any lives lost. True fire prevention consists in forestalling fires even where the raw materials of combustion cannot be, or merely have not been, removed. Sprinklers tend to do this. Municipal officials should be encouraged to make these regular analyses and also to require the installation of automatic sprinklers in city-owned buildings, including garages and shops, and in such schools, hospitals, institutions, city halls, and court houses as are of combustible construction. The Chamber of Commerce also could well devote one meeting a year, during Fire Waste Week, to discussing whether more of town's buildings should be sprinkled.

Mack municipal forest-fire truck with tank and 200-gpm Hale pump plus a 115-gpm portable pump with three hose reels totaling 3,000 feet of hose.

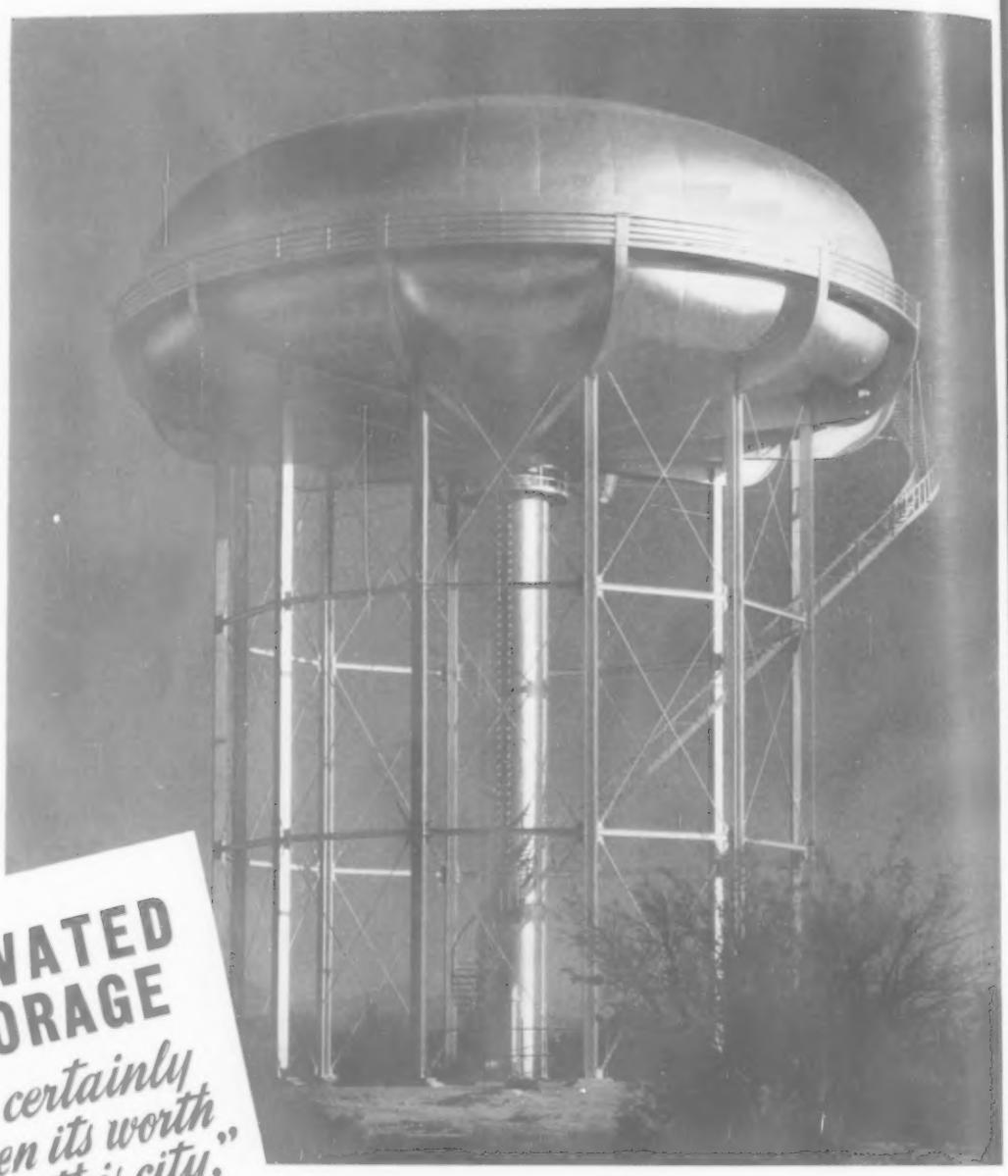
Forest Smoke Silhouettes Ships

PREVENTING forest fires aids military flying, says Charles A. Gillett, Norfolk, Va., industrial forester for the Seaboard Air Line Railway. At an altitude of 3,000 feet, a flyer recently counted 43 separate forest fires. Much flying time is lost due to haze and the "loom" created by fires and smoke. This smoke can also screen enemy submarines from air observation. It reduces the visibility and effective range of coast artillery. It is said that the glow of forest fires has been seen for twenty miles off shore and has silhouetted ships to make them targets for enemy submarines. In addition, forest fires are a direct danger to military and naval shore establishments, as woodlands border on some of these establishments—including camps and ammunition dumps.

The cost of operation of a fire fighting force, like everything else, is materially greater than that of past years. Costs, it is estimated, have increased from 15 to 20 per cent, and therefore it will be necessary to provide a materially increased appropriation in order to hold the forest battle line.

Experienced National Contractors

A NUMBER of contractors who have been gathering special experience in the construction of war projects are going to be available for city improvements after the war. Would any cities like to have a list of top-flight contractors capable of building almost anything nearly everywhere? Post-war planning might well include compilation of a list of the most able contractors.



"ELEVATED STORAGE *has certainly proven its worth to this city.*"

. . . says the Assistant Superintendent of the Water Department at Tucson, Ariz.

TUCSON, ARIZONA'S enthusiasm for elevated water storage is echoed throughout many municipalities where Horton elevated tanks were installed to improve peacetime water supply systems.

The "over-night" growth of wartime industries, coupled with shifting populations, has only served to emphasize the adequacy of elevated water storage to meet all emergencies. In water supply systems incorporating Horton elevated storage, more uniform distribution pressures are maintained. Elevated storage too, provides for pumping during off-peak periods and the maintenance of an ample reserve of water for fire protection.

The 1,000,000-gal. radial-cone bottom tank shown above serves as a monument to the thoughtful planning of Tucson's civic leaders and engineers who recommended its installation. A study of how this Horton elevated storage tank is helping Tucson could aid those planning post-war water supply systems.

CHICAGO BRIDGE & IRON COMPANY

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Wartime Water-Works Operation

A vivid demonstration of permanence in water service. Although this hydrant has been completely enveloped by tree growth it still gives the same excellent service that it did when it was installed

Permanence in Water Service

THERE is no one in Osceola, Arkansas, who is just exactly sure how long this Murdock hydrant has been in service. The best that anyone can say is that when the hydrant was installed, the tree that now encompasses it was just a small sapling.

The interesting thing is that the hydrant still works perfectly; and officials feel it should continue to work indefinitely unless the tree entirely surrounds it. The present growth does not impair operations. The hydrant is easy to repair by removing the nozzle and the two top bolts and by lifting out the entire working parts with the valve containing the washers attached to the bottom.

War-Winning Water Works Conference

BOTH wartime water works operation and post-war developments will be emphasized at the sixty-third annual meeting of the American Water Works Association, to be held June 15 to 18 in Cleveland. New materials for water works will be considered by W. V. Weir, Superintendent and Chief Engineer of the St. Louis County Water Company, St. Louis, Mo.; and Dean F. M. Dawson, College of Engineering, Iowa University, Iowa City, Iowa.

Revolutionary methods of water treatment to eliminate flourine that causes tooth decay will be discussed.

War Production Board policies are to be reviewed by Arthur E. Gorman, Chief, Water Supply Section, Power Branch. Post-war planning will be analyzed by Willard T. Chevalier, Publisher of *Business Week* and Abel Wolman, president of the Association.

A contest with cash prizes is to be conducted for the best paper by superintendents on the subject "Meeting War-Time Emergencies."

The "Fish Test" for Poisoned Water

AMONG the instructions that the California State Department of Health has issued to the various water departments under its surveillance is the interesting and extremely simple "fish test" to detect the possibility of poisons. Locating the test barrel at the head of the water system, the operators are advised to inspect the fish several times a day. Black bass are mentioned. Gold fish, gambusia affinis, and trout also have been used.

This is only one of several recommendations issued by officials of the department to help operators protect their water works against possible damage either by sabotage or bombing attacks. Other suggestions include increased laboratory control, practice in emergency main sterilization, and various protective instructions to the customers for health protection.

Don't Bottleneck Chlorine Deliveries

HERE is a little priority problem you can solve yourself.

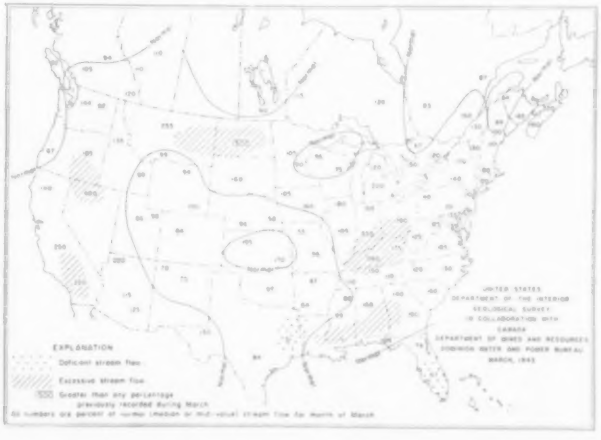
If you are having trouble getting chlorine, look around and see whether you have returned all your chlorine cylinders. The number of these is limited because of the fact that many have been side-tracked for use in essential and vital war industries. However, there is a sufficient number available if they are kept in constant circulation.

R. J. Quinn of the Mathieson Alkali Works, Inc., states that most users of compressed gas are trying to return their cylinders promptly but find that railroads and trucking companies hesitate to handle small shipments. It is therefore up to the operator to persuade these companies to cooperate in arranging shipments and help the transportation manager understand fully the importance of their delivery.

Water Resources for March

THERE will be no rationing of water as far as the supply is concerned if present conditions continue. Service and ground water supplies are favorable over most of the important industrial and power-producing areas in the United States, and prospects seem bright for the continuation of these conditions during the immediate future, according to the March report of the Geological Survey of the United States Department of the Interior.

However, adverse water conditions exist in southern Florida and the continued low rainfall in the central and southern plains and Arkansas and eastern Texas are being reflected in decreasing stream flows in that area.



Storage in underground reservoirs varies from normal to high in states along the Atlantic coast. Ground water conditions continue to be favorable along the west coast with the exception of Washington and are particularly good in southern California.

Garbage Disposal by Grinding

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PRACTICAL — SANITARY — EFFICIENT

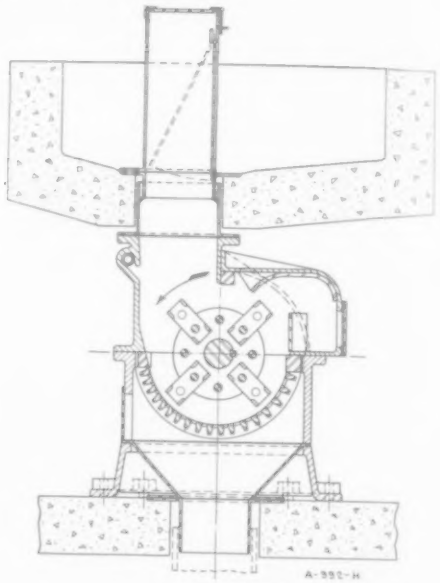
JEFFREY GRINDERS

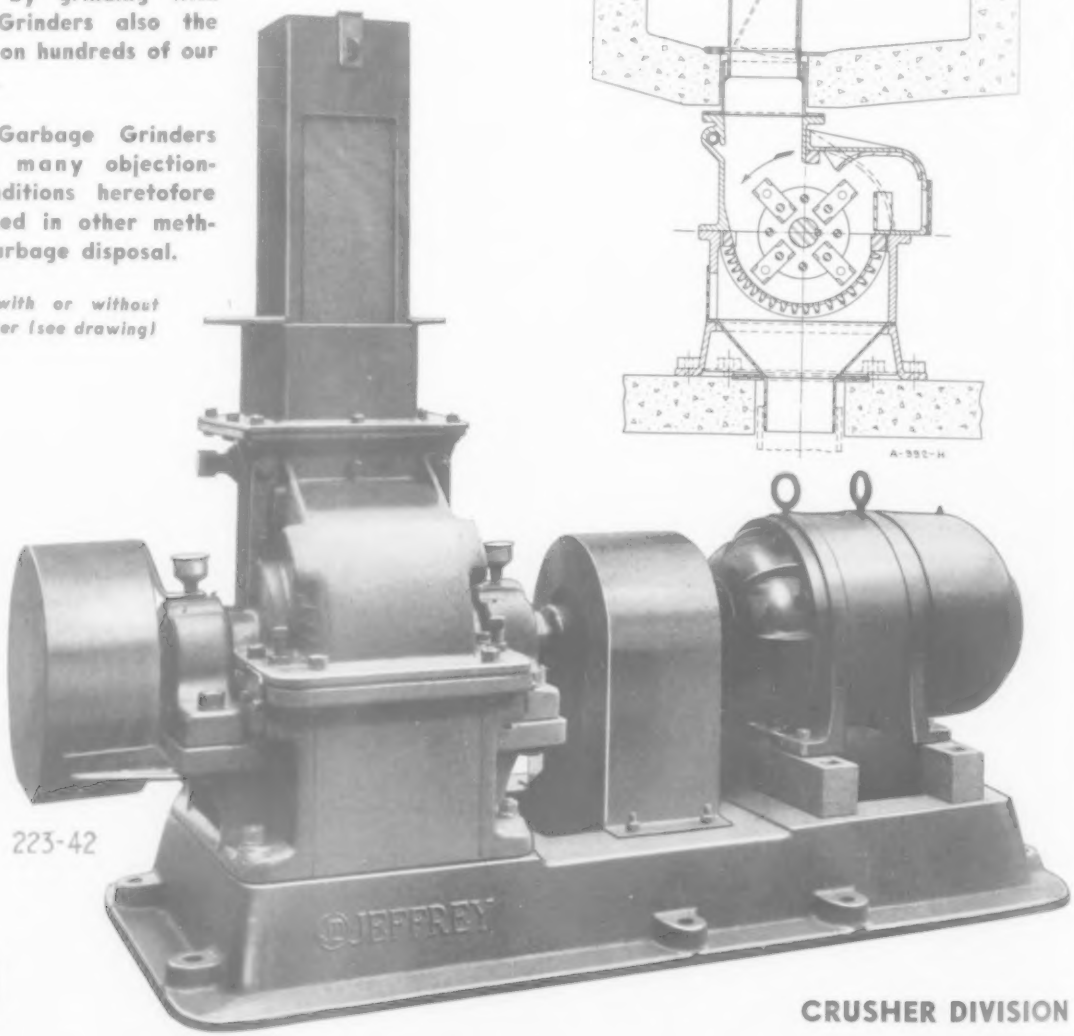
The solution to garbage disposal in hundreds of army posts and camps.

Disposal by grinding with Jeffrey Grinders also the practice on hundreds of our warships.

Jeffrey Garbage Grinders eliminate many objectionable conditions heretofore experienced in other methods of garbage disposal.

Furnished with or without metal catcher (see drawing)





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Sewerage and Sewage Treatment

When War Industry Wastes Hit a Sewage Treatment Plant

THE unprecedently large vloume of industrial wastes with their widely varying characteristics have presented major problems in sewage treatment at New Brunswick, N. J. Although this plant was built in 1937 with conservative allowances for both industrial and domestic growth, already the hydraulic capacity of the plant has been exceeded. The sludge digestion facilities have become inadequate, and the capacity of the vacuum filters has been very nearly outgrown.

According to Sol Seid, Supervisor of the sewage treatment plant at New Brunswick, in a paper delivered at the New Jersey annual Sewage Works Association meeting on March 25, industrial wastes have introduced excessive and unanticipatedly high loads at the plant. The pH values range from as low as 0.6 to a high of 11.8. Similarly, high and rapidly changing characteristics were apparent in the total alkalinity, total solids, suspended solids and oxygen demand of the sewage. The plant, designed to handle an average of 9 mgd or 13½ mgd for peak periods, during the current year has already had to handle daily averages varying from 9 to 15 mgd. Mr. Seid stated that digestion facilities had become so inadequate that he was now filtering raw sludge only.

Revisions

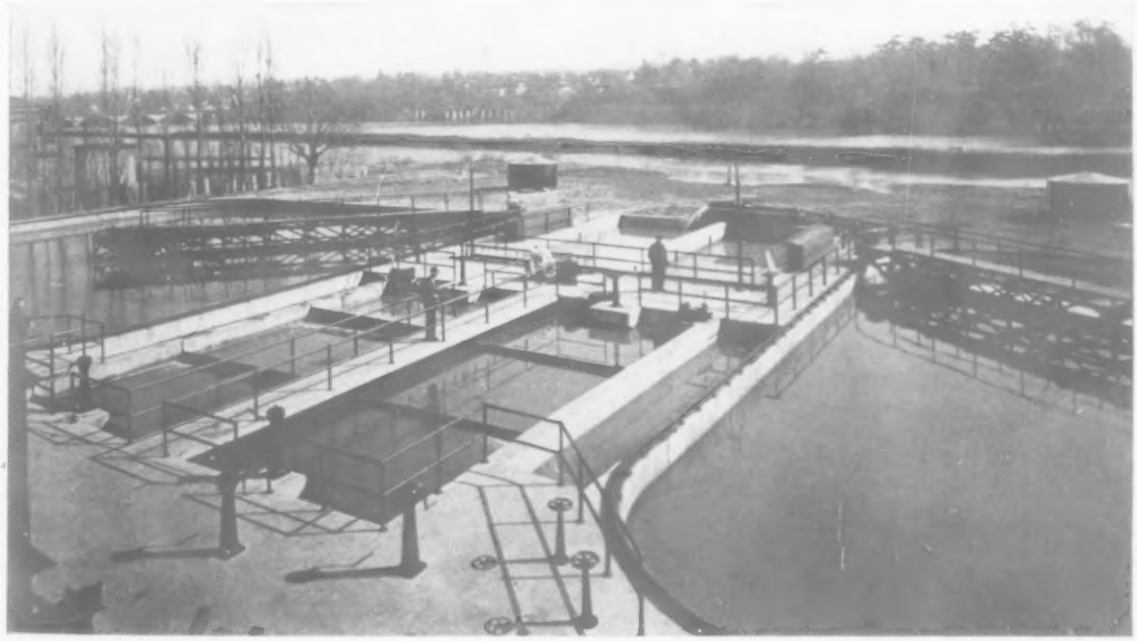
In order to make existing facilities adequate, Elson T. Killam, consulting engineer, instituted a program of plant revisions that will utilize existing facilities to the utmost. Changes in piping, gates, and weirs will increase the hydraulic capacity of the plant to approximately 13½ mgd. The installation of additional equipment, including chemical feeders, will also help alleviate the problem—as well as other measures such as the rehabilitation of various vital equipment, the construction of wet wells, and other improvements at one of the pumping stations.

A. M. Rawn Named Head of WPB Sewerage Section

A. M. RAWN, chief engineer and general manager of the Los Angeles Sanitation District and vice-president of the Sewage Works Federation, has been named chief of the new Sewage and Sanitation Section by Maury Maverick, Director of the Governmental Division of the WPB. This is in response to recommendations made by the Sewage Works Federation, the American Society of Civil Engineers, the American Society of Mechanical Engineers, as well as by WPB advisory consultants.

Sanitation Authority

Mr. Rawn has been known for many years as a leader in the sanitation field in the west. He is a member of the board of directors of the American Society of Civil Engineers and past president of the California Section. He has already served as a consulting engineer on sewerage for the Construction Quartermaster during the construction of new Army cantonments.



A portion of the New Brunswick plant that is being so badly overloaded by war industry wastes. At the extreme right and left are shown the Dorr clarifiers. In the center foreground are the flocculators and the turbo-mixer. Located directly behind them are the chlorine detention tanks and in the background near the river's edge can be seen the two 105,000 cubic feet digestion tanks.

The clarifiers are designed for a detention of 2.58 hours for a flow of 9 mgd. The flocculators consist of three rows of 8-foot paddles set at right angles to the direction of flow. The turbo-mix chamber provides a detention period of 0.9 minutes also at a flow of 9 mgd. The digestion tanks are designed for the equivalent capacity of 2.5 cubic feet per capita based on a population of 40,735 people. The chlorine contact tanks are baffled and give a detention time of 18.2 minutes for the design flow of 9 mgd.

SPEED

TO KEEP YOUR GRADERS ROLLING FOR VICTORY...

- ✓ Check condition of engine regularly.
- ✓ Change lubricating oil and renew filter elements every 100 hours of use.
- ✓ Lubricate all parts of grader regularly.
- ✓ Service air cleaner every 10 hours of use.
- ✓ Clean fuel oil filters at least every 60 hours.
- ✓ Don't ride clutch. Adjust clutch pedal when and as needed.
- ✓ Keep electrical system in good condition —check battery regularly.
- ✓ Keep lost motion out of grader—use adjustments for wear and replace parts worn out.
- ✓ Keep tires inflated to recommended pressure.

If you need help or advice on any of the above, see your local Adams distributor.

Just as SPEED allows PT boats to roar in, do their jobs and get away quickly so their high transport speeds and wide range of working speeds enable Adams Motor Graders to get to a job quickly, finish it in a hurry, and get on to the next with minimum loss of valuable working time . . . SPEED is but one of the features of Adams Motor Graders that will help you to complete your jobs quickly, economically and profitably!

J. D. ADAMS COMPANY • INDIANAPOLIS, INDIANA

Adams motor graders, leaning wheel graders, elevating graders, hauling scrapers, tamping rollers, bulldozers and road maintainers are used by allied forces throughout the world.

Adams

ROAD-BUILDING AND EARTH-MOVING EQUIPMENT

Street Maintenance and Construction

CALCIUM CHLORIDE ASSN. PHOTOGRAPH

Maintenance crews shovel a stabilized base mix into the pavement break, and compact it by driving the truck over the area. This patch was large and some of the disintegrated surface was used for filler.

A Non-Asphalt Patch for Bituminous Streets

ONE emergency method of getting around the asphalt shortage when repairing your bituminous streets, is to use a soil-aggregate patching mix containing calcium chloride.

According to the Calcium Chloride Assn., the material should consist of a crushed, well-graded aggregate with a maximum size of ½-inch and a soil with a plastic index of 7 to 10. For best results it should be pre-dried, pulverized, and mixed with the aggregate in an approximate ratio of 1 part of soil to 7 parts of aggregate. Experience on the part of the maintenance operator will dictate the most satisfactory proportions for the soil and aggregate available.

Moisture Content

After dry-mixing, water and calcium chloride should be added, and the complete batch thoroughly remixed. The Association states that the water will probably be from 6 to 10 per cent of the mix by weight, and should be just enough to hold the patching mixture together when compressed. The Association recommends about 100 pounds of flake calcium chloride per cubic yard of mix, or approximately 3 per cent dead weight. It also advises treating the surface of the patch with calcium chloride at 1½ pounds per square yard.

In preparing the holes in the pavement for repair, loose material should be removed and the sides squared to make the patch fit solidly. It is important that it be placed on a good subgrade. If the subgrade appears faulty, maintenance measures must be more complete.

Can Be Stored

The Association states that a patch mix can be prepared in advance and stored for use at any time. Moreover, the mix will not freeze with calcium chloride in it, but it should be covered as a protection from rain or snow if it is stored outside.

Street Department Geared for War

OF ALL the municipal departments in Dayton, Ohio, few have responded more completely to serve its city than the Division of Streets. This division not only maintains streets but collects garbage and refuse as well.

Within a short time after Pearl Harbor, this division, almost to a man, was attending night classes preparatory to becoming Dayton's Civilian Defense Road Repair Crew. And to insure mobility of crews in case of a disaster, a plan was devised whereby picked drivers were assigned trucks to take home at night. Each of these drivers was furnished a list of employees who lived in his immediate neighborhood and who could be brought to a central meeting point quickly.

Constructed Bomb Shelter

In connection with public education, this division, assisted by the Division of Parks, erected a model public bomb shelter in one of the parks. The division also was actively engaged in both the March and October city-wide scrap metal drives. For three days all other activity except rubbish, garbage, and dead animal collection was suspended while employees and trucks hauled the accumulated scrap.

In addition, the department has been drafted to collect tin cans. Three trucks, each manned by a driver and a laborer are routed in such a manner that once each month every housewife in the city is afforded the opportunity to contribute used tin cans to help war production.

In Your Post-War Project—

Locate Sidewalks Further From the Curb

WHEN making post-war plans for street construction, engineers should locate the sidewalk from 5 to 10 feet back of the curb, even at the expense of robbing plot depth, according to Frank E. Harley, Civil Engineer, Fair Lawn, N. J.

Mr. Harley, vice-president of the New Jersey Municipal Engineers Association, states in an article appearing in the *New Jersey Municipalities* that better looking, wider appearing streets result—particularly if the trees are planted back of the sidewalk from 5 to 10 feet. Planting of the trees in this way eliminates shading and blocking of the street lights, and gives full utilization of the street lights year round, instead of just when the leaves are off the trees. It also aids in maintenance by reducing sidewalk-heaving because of root growths.

This illustration of a street without a sidewalk improvement shows how far pedestrians will stay from the curb line when given the opportunity to make their own path.

FROST STILL BOILS IN WARTIME

GARDNER-DENVER PORTABLE COMPRESSORS, *for example, are delivering full air output wherever it is needed—in cities at any altitude—under all climatic and weather conditions. Their constant dependability is assured by fully-water-cooled compressor construction which assures cooler operation—low oil consumption—minimum attention and maintenance requirements. Both gasoline and Diesel engine driven models are available in a wide capacity range.*

FROST boils and other surface breaks must still be repaired—to keep war traffic moving over city streets and roadways. On repair jobs such as these—on sewerage or water main repair jobs—for building access roads—and for your other necessary projects, Gardner-Denver Portable Compressors and Paving Breakers form a "combat unit" which can help you do the job faster—at less cost to taxpayers. In cities across the land, Gardner-Denver equipment is today helping to carry on the home front fight against wear and delay.

For full information, write Gardner-Denver Company, Quincy, Illinois.

GARDNER-DENVER

Since 1859

GARDNER-DENVER B-72H PAVING BREAKERS, *likewise, are serving many American cities on their toughest breaking or demolition assignments. The B-72H is a ruggedly built tool that delivers a fast and powerful blow, even after long service. Designed with renewable chuck liner which may be replaced at small cost. Can be easily converted to a powerful sheeting driver by replacing front end assembly with a sheeting driver attachment.*

Public Health

National Conference

THE annual wartime Public Health Conference will fit the present wartime schedule not only in regard to the topics under discussion but also the scheduling of the meeting, according to an announcement by the Executive Board of the American Public Health Association.

The conference will be three days in length, held Oct. 12, 13, and 14. New York City has been selected as the location because more than 40 per cent of the membership is concentrated there. The radio will be used as extensively as possible to bring the benefits of the conference to health workers in distant states. It will be devoted exclusively to wartime emergency problems as they affect public health and the public health profession.

Health Administration In the Small Town

ACCORDING to a survey of health officials for the smaller Pennsylvania municipalities conducted by George W. Dodson, Director, Bureau of Municipal Affairs, Harrisburg, Pa., 80 per cent of the communities with a population of 5,000 or less in this state have boards of health or health officers of some type. Most of the remainder stated that the State Department of Health carried on whatever health functions were administered with the municipality.

Better than 70 per cent of those having health officers stated that the officer held either another borough or township office or were in some other employment. This other employment was in a rather wide range, varying all the way from physician to real estate agent or photographer. The salary received varied anywhere from $10 to $350 per annum.

Noise Abatement Awards As War Contribution

IN THE interest of manpower conservation and as an aid to war production, the National Noise Abatement Council plans to make four awards this year for outstanding civic achievement in the reduction of needless noise.

An award will be given the city in each of four population groups which submits on or before July 1, 1943, the most convincing evidence of accomplishment in the elimination of unnecessary street noise and the control of noises in industry, offices and the home, during the period June 7, 1942 to June 5, 1943, and in the observance of National Noise Abatement Week, May 30 to June 5, 1943.

"We know that excessive and unnecessary noise is a definite deterrent to the war effort," said Sam L. Hooper, president of the Council, "especially when it occurs in war industry, in offices engaged in executive and clerical work incident to war production, and in or about homes where war workers live and must secure essential sleep and rest."

Cities wishing to compete for the award in their group should contact the Committee on Awards, National Noise Abatement Council, 9 Rockefeller Plaza, New York, N. Y. All cities or towns are eligible.

This striking poster was painted for the National Noise Abatement Council by Howard Scott, one of America's foremost poster artists. Reproduced in full color, it will be given widespread distribution throughout the country during 1943.

Progress in the Control of Venereal Disease

"WHILE the fight against the venereal diseases is going better in the present war than it did in the first World War, it is not going well enough, and the loss to the armed forces will be colossal unless civilians do their part much better," Dr. Walter Clarke, executive director of the American Social Hygiene Association said recently in making public the Association's Annual Report for 1942. The report states that the present venereal disease rate is the lowest in our wartime history.

"The Federal Government has announced its intention of building the armed forces up to 10,800,000 men," Dr. Clarke said. "If a venereal disease rate only one half that of the first World War is achieved, about 378,000 of these men will acquire syphilis or gonorrhea each year. If the infected men lose on the average only one half the time lost by first World War victims, the loss will total 7,560,000 man days per year. This figure is equivalent to 21,000 men out of service, and a burden to the medical facilities of the armed forces for one full year."

Public Opinion Converted

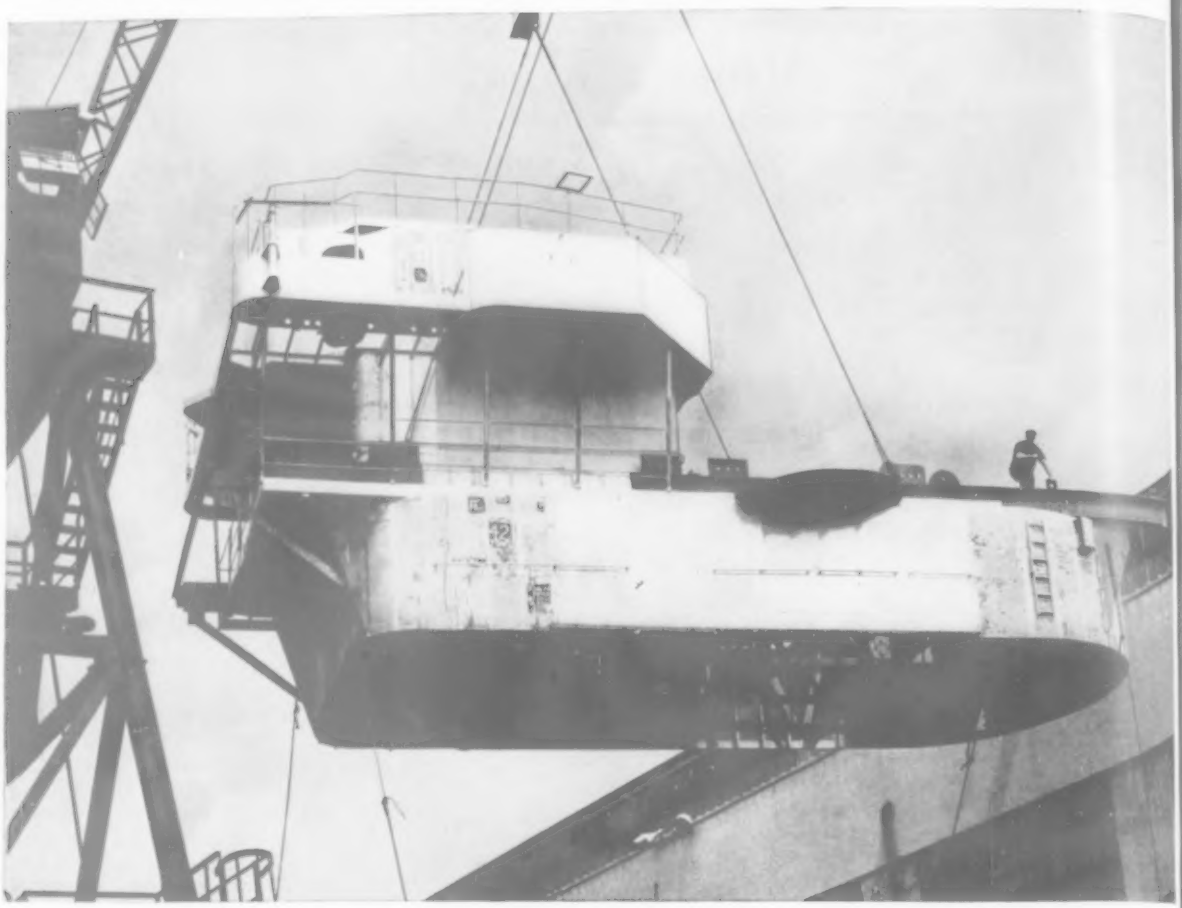
In the report, Dr. Clarke states that the greatest achievement of the past year is the obvious conversion of public opinion, and particularly of lay and government leaders, in strategic communities from coast to coast to a realization of the importance of the venereal disease fight and to a belief that the conditions which lead to their spread can, and must, be corrected. The report warns that the prostitution interests and the racketeers are not yet defeated and that the fight begun so successfully is not yet won. The report of the association calls for expanded activities and vigilance in 1943.

OCD Organizes Gas Defense Corps

ORGANIZED planning for gas defense is rapidly taking shape under the direction of the Medical Division of the Office of Civilian Defense. Courses preparatory to the meeting of this war menace are being presented at selected colleges and universities.

The Gas Protection Section of the Medical Division of OCD is functioning through nine Civilian Defense regions. In each city, or defense council, the Senior Gas Officer trains Gas Reconnaissance Agents to be responsible for the identification of the agent, the collection of samples, the prevention of casualties, the decontamination of gassed areas, and cooperation with other responsible agencies.

Plans now are to prepare cleansing stations in the ratio of one per 50,000 population. According to present plans, each hospital of 150 beds or more will be provided with such facilities.



PROTECT YOUR CABLES for Vital War Work

SETTING in place this 40-ton destroyer deckhouse and other huge prefabricated ship sections represents one of the important wartime uses of wire rope.

To keep cranes, shovels, hoists, draglines, derricks in service . . . doing vital war work . . . operators everywhere are protecting their wire rope by lubricating it with *Texaco Crater*.

Texaco Crater penetrates to the very core of wire rope, sealing each wire in a tough, viscous film that reduces internal friction and wear, keeps out moisture, prevents corrosion, makes ropes last longer.

So effective have Texaco Lubricants proved in increasing output that they are definitely preferred in many important fields, a few of which are listed in the panel.

A Texaco Lubrication Engineer will gladly cooperate in the selection of the most suitable lubricants for your equipment. Just phone the nearest of more than 2300 Texaco distributing points in the 48 States, or write:

☆ ☆ ☆

The Texas Company, 135 East 42nd Street, New York, N. Y.

THEY PREFER TEXACO

★ More Diesel horsepower on streamlined trains in the U. S. is lubricated with Texaco than with all other brands combined.

★ More locomotives and railroad cars in the U. S. are lubricated with Texaco than with any other brand.

★ More revenue airline miles in the U. S. are flown with Texaco than with any other brand.

★ More buses, more bus lines and more bus-miles are lubricated and fueled with Texaco than with any other brand.

★ More stationary Diesel horsepower in the U. S. is lubricated with Texaco than with any other brand.

TEXACO

TEXACO Lubricants and Fuels

FOR ALL CONTRACTORS' EQUIPMENT

TUNE IN FRED ALLEN EVERY SUNDAY NIGHT—CBS ★ HELP WIN THE WAR BY RETURNING EMPTY DRUMS PROMPTLY

Phosphorescent Paint Identifies Hose Lines

FIRE CHIEF A. F. Taylor has applied phosphorescent paint to all department hose lines in order to identify them by number at night. On each 50-foot section of hose, the number of the engine company which carries it has been painted. With 19 engine companies each carrying 40 sections of 50-foot hose with them, the department has recognized the possibility of mixups during blackouts. Having the numbers readable at night also will help battalion chiefs to easily identify any engine company at a large fire by glancing at a hose line, even though the men manning the hose might be afar off.

SERGEANT GEORGE E. TOLES,
Camp Lee, Va.

Heavy Military Travel on Texas Roadways

TRAFFIC fatalities in Texas were slashed more than a third in 1942, says State Police Director Homer Garrison. There were 1,316 fatalities reported in 1942, against 1,981 in 1941, a decrease of 33.6 per cent due to slower speeds, reduced mileage, and a general improvement in the public's safety consciousness.

Vehicular mileage, however, did not decrease nearly so much as might have been expected. Because reduction in civilian traffic was offset considerably by the state's rapid growth as a military and industrial center, vehicular mileage decreased only 9.9 per cent under the 1941 figure. The estimated figures are 17,848,010,205 miles in 1941 and 16,087,760,798 miles in 1942.

Haverhill Adds to Its New Parking Meters

By J. BECK PIERCE
Auditor of Accounts

ON May 7, 1942, the city of Haverhill, Mass., population 46,752, installed 133 parking meters made by the Dual Parking Meter Co. of Oklahoma City. They were of the following types:

107, 1 hour for 5c and 12 minutes for 1c @ $60.00; 60, 2 hours for 5c and 24 minutes for 1c @ $60.00; 4, at post office and 15 minutes for 1c @ $56.50.

The company gave six months' maintenance, plus spare parts, and instructed one of the police officers in the repairing of the meters. We use three officers daily in patrolling the area, watching for violators and general supervision.

The results have been most satisfactory from both municipal and public viewpoints. Our main business street is narrow, and there were frequent traffic tieups and double parking before the meters were installed. Enforcement of parking rules was very unsatisfactory. All these troubles have been eliminated.

Since May 7, 1942, the meters collected 10,116.16. In 1942 we averaged $225 per week, and this year, in spite of gas regulations, our average is $185 per week.

The situation has been so satisfactory that we have just ordered 35 more meters at $47.50 each, providing 1 hour for 5 cents and 12 minutes for 1 cent. We shall install them ourselves.

General Program of Mutual Fire Aid

THE Office of Civilian Defense has compiled a "Report from the Regions on Laws Affecting Mutual Aid and Firemen's Compensation." This information, furnished at the request of Dean Landis, Director of OCD, marks the first step in the development of mutual aid legislation in all states not now having them. A suggested Fire Mobilization Act, adopted by the Conference of Governors, also is available.

Women Tunnel Attendants

TWELVE women, replacing policemen in the armed forces or in industries, and sworn in by the New York City Tunnel Authority and the New York City Police Department for duty as toll booth attendants, began work April 14 at the Queens Midtown Tunnel. Commissioner William H. Friedman, of the New York City Tunnel Authority, said: "These women have been selected from civil service lists when available; otherwise preference has been given to the wives of men called to the Army. They are helping the war effort just as much as if they were in the industries, because the Queens Midtown Tunnel is an essential interborough traffic artery which saves both rubber and gasoline."

New York's New Tunnel Attendants on the Job

Keep Up-to-Date on New Equipment

Please check over the following list of interesting catalogs obtainable free of charge and either write direct to the manufacturers for their literature, or, if you prefer, put a circle around the identifying numbers below to indicate the catalogs you want, mail this coupon to The American City Magazine, 470 Fourth Ave., New York, and we will see that the catalogs are sent to you without expense or obligation on your part. 5/34

617 618 619 620 621 622 623 624 625 626 627
628 629 630 631 632 633 634 635 636 637
638 639 640 641 642 643 644 645 647 648 649
650 651 652 653 654

Name ..... Position .....

Address .....

Free Sample of Tile Cleaner

617. A free sample of Tilite, a chemical cleaner that has demonstrated its usefulness in cleaning mosaic, ceramic, and vitrified tile, will be furnished by Penn Salt. It removes embedded dirt, discolorations, and rust quickly and economically, and will not leave a slippery surface. Write Pennsylvania Salt Mfg. Co., Dept. AC, 1000 Widener Bldg., Philadelphia, Pa.

Asphalt Maintenance Equipment

618. Standard Steel Works, North Kansas City, Mo., have a complete line of asphalt maintenance equipment. Street officials will be particularly interested in Model 400 used for repairing ravelled shoulders and Model S1 for repairing broken asphalt. Write this company for literature on this equipment to help you meet your asphalt maintenance problems.

Double-Suction Centrifugal Pumps

619. The mechanical features of the new Gardner-Denver double-suction, horizontally-split case centrifugals should be of interest to you. Built for durability and long life, the casings, impellers and other vital parts are cast of GarDurloy, the modern high strength cast-iron developed by Gardner-Denver metallurgists. The pump is manufactured in a wide range of capacities. Full specifications are obtainable from Gardner-Denver Co., Quincy, Ill.

Meter Box Covers

620. The catalog published by the Ford Meter Box Co., Wabash, Ind., describing this company's meter box covers, is particularly interesting. These covers are made in a variety of types and sizes for all conditions. Double-lid covers have air-space insulation and sloping skirts which cut heat loss to a minimum. Single-lid covers have overlapping or inset lids. The covers are made to give a lifetime of satisfaction and use.

Fire Fighting Apparatus

621. Ward LaFrance Truck Division, Elmira, N. Y., will not only furnish information and literature but also advise about specially engineered Ward LaFrance equipment for your fire department. This company has been supplying municipalities for many years with apparatus of high standards of ruggedness and performance.

Prolonging the Life of Steel Cable

622. You can obtain a new 32-page booklet describing the Texaco Crater lubricant which has been especially developed to prolong the life of wire rope. This lubricant, furnished by The Texas Co., 135 E. 42d St., New York, penetrates to the very core of the wire rope, sealing the wire in a tough, viscous film that reduces friction and wear.

Wartime Water Meters

623. To meet wartime restrictions, the Worthington-Gamon Meter Company is now designing its water meters with specially treated cast iron casings and glass register boxes in place of critical bronze. However, these outer changes have no relation to the inner parts and the material and accuracy is still unchanged. All parts are interchangeable with other Worthington-Gamon meters. You can obtain full information on these new meters by writing the Worthington-Gamon Meter Co., 282-296 South St., Newark, N. J.

Brushes for Speed Sweeping

624. Municipalities will be interested in descriptive literature and price lists on the "Speed Sweep" brushes manufactured by the Milwaukee Dustless Brush Co., 520 N. 22nd St., Milwaukee, Wis. The Heavy Duty Speed sweep will do your street and other outside work most efficiently, and the Double Duty Speed sweep your inside wood and concrete floors. The manufacturer asserts that these brushes will do the work faster, cleaner, and easier under a variety of conditions, and may be obtained in a number of sizes and prices.

Servicing Street Equipment

625. Realizing the importance of keeping existing street maintenance equipment in good operating condition for the duration, the Austin-Western Machinery Co., Aurora, Ill., has enlarged its servicing and maintenance departments. For help in meeting your problems write to Austin-Western, outlining your particular difficulties.

Main-Line Meters

626. Bulletin No. 308 issued by R. W. Sparling, Box 3277, Terminal Annex, Los Angeles, Calif., gives you information on the various styles and sizes of Sparling Main-Line Meters that will fit threaded, flanged, bell and spigot, or welded mains. The accuracy of the meters is guaranteed within 2 per cent throughout the rated range. Head pressure loss is negligible in most cases. The meter is made so that it can be installed as easily as a length of pipe.

Maintaining Duplicating Equipment

627. The A. B. Dick Co., Dept. AC-543, 720 West Jackson Blvd., Chicago, Ill., has issued an interesting new booklet containing valuable information not only on the maintenance of Mimeographing equipment but on other office supplies as well. It gives pointers on the care of your duplicator, the correcting of Mimeograph stencils, and the case of the Mimeograph machine itself.

Noiseless Check Valves

628. The bulletins on the Smolensky Radialflow Noiseless Check Valves describe how well-adapted this type of equipment is for municipal water works use. This check valve does away with friction head loss, assuring efficiency in operation. The flow through the valve is radial and the valve assures noiseless operation. For full information write to The Smolensky Valve Co., 1931 W. 47th St., Cleveland, Ohio, for bulletin No. 14.

Protected Hydrants

629. The A. P. Smith Mfg. Co., East Orange, N. J., has descriptive literature and catalogs relating to its Protectop hydrant. The important feature of this hydrant is that it can break only at one place and only the frangible standpipe clamp and the cast iron stem section will need to be replaced. This enables crews to make repairs quickly with a minimum of expense. The compression type valve prevents the possibility of flooding in the event of a break.

New Design Principles for Pipe Laying

630. The Cast Iron Pipe Research Association, Thomas E. Wolfe, Engineer, Peoples Gas Bldg., Chicago, Ill., has developed a new Law of Design regarding pipe laying that will be of great value to municipal officials. This new principle, developed by engineers and pipe users under the auspices of the Association, takes the guess out of determining proper weights and thicknesses of cast iron pipe in underground services.

New Water Softeners

631. A new bulletin has been issued by The Permutit Co., Dept. G, 330 West 42nd St., New York, describing its "Spiractor" cold-lime water softener. Interesting features of this are its short detention time, the elimination of sludge and the simplicity of operations. Only a small area is required with the newly-developed equipment, according to information in the bulletin.

A Priority-Free Sewage and Drainage Pipe

632. A booklet on Orangeburg Fibre Pipe has just been published by the Fibre Conduit Co., 292 Madison Ave., New York, which describes the construction and characteristics of this non-metallic pipe and points out that it is durable, non-corrosive, light, easy to handle and install, and economical. It also gives installation data. This pipe is available in a wide range of sizes.

(*Continued on page* 21)

WHICH OF THE CATALOGS WOULD YOU LIKE?

(*Continued from page 18*)

Breakpoint Sterilization

633. No one feature of water-works operation has attracted more attention in recent years than the process of breakpoint chlorination. You can secure complete information by writing to Wallace & Tiernan Co., Inc., Belleville, N. J. This company not only will give you bulletins on this process but will outline methods of applying it to your plant.

Fire-Fighting Equipment

634. When you are studying additions to your fire-fighting equipment, you will receive a great deal of help from the bulletins issued by the Fire Engine Division of Mack Mfg. Corp., Long Island City, New York. Built with extra staying power, and extra pumping power, this equipment will give you real service where it is needed.

Pipe-Cleaning Service

635. The bulletin entitled "Flexible" issued by the Flexible Under-Ground Pipe-Cleaning Co., 9059 Venice Blvd., Los Angeles, Calif., gives some interesting information on pipe-cleaning work. It shows photographs demonstrating how this pipe-cleaning operation acts, the results it gives, and the equipment used. It also contains testimonies of the efficiency of the work.

Precalked Cast Iron Pipe

636. You can obtain literature from the McWane Cast Iron Pipe Co., Birmingham, Ala., describing that company's resourceful development consisting of precalked cast iron pipe. This precalking process eliminated the need for tedious lead melting and pouring. Joint materials are placed in the pipe bell at the foundry and are easily made by untrained men.

Saving Labor in Street Work

637. The new folder describing the Flink one-man spreader will give you some good hints on beating the manpower shortage in street repair work. This folder describes a spreader that may be operated by the driver of the truck alone. It will handle fine or coarse material with a wide range of sizes. It has a sturdy, reliable chain drive working from the rear wheel of the truck and will operate while the truck is being driven either forward or backward. Write to the Flink Implement Co., Streator, Ill.

Maintenance Chemicals

638. If you need chemicals for the purpose of disinfecting, fungicides, deodorants, insecticides, cleaners, floor finishes or other related needs, write to The C. B. Dolge Co., Westport, Conn.

Pump Maintenance and Repair

639. To help water works officials maintain their municipal water systems, Layne & Bowler, Inc., Memphis, Tenn., is establishing a service which will assist in keeping this equipment operating efficiently. If your wells and pump need attention, write to this company giving full details of your requirements. Layne & Bowler, Inc., state that there is no obligation connected with this offer.

Gate Valves That Can "Take It"

640. Do you have full information on the Chapman "Beamed Waterway" gate valves? Literature by the Chapman Valve Mfg. Co., Indian Orchard, Mass., tells how this well-engineered equipment eliminates excessive wear encountered in conventional double-disc parallel seated gate valves. Extra bearing contact is secured by vertical beams in the downstream port, so that the disc cannot tip into the waterway, wear out the seat rings, and cause leaks.

Motorcycle Maintenance

641. If you are having trouble with the maintenance of your police motorcycles write to the Indian Motocycle Co., Springfield, Mass. This company reports that parts are available in limited quantities under government rulings, and officials with the company will furnish information promptly on how to clear these requests.

New Test Plug

642. Water Works officials will be interested in the new test plug for testing pipe as it is being laid and eliminating the necessity of open trenches and hazards. It can be installed by unskilled labor and the same clamps fit many sizes of pipe. Write to Test Plug Mfg. Co., Skokie, Ill., for circulars and complete information.

Jointing Cast Iron Water Mains

643. The Leadite Co., Girard Trust Co. Bldg., Philadelphia, Pa., will furnish literature on the use of Leadite for jointing cast-iron water mains. This time-tested product can be melted and poured, it requires no large bell-holes to dig, and effects real savings.

(*Continued on page 22*)

Cleanliness CUTS CASUALTIES
Our armed forces everywhere are also fighting dirt and disease—frequently more dangerous than bullets. Mobile laundry units are provided, with small gasoline engines as a part of the power equipment. One more "service star" for rugged, dependable Briggs & Stratton engines, now serving our armed forces in many ways.
AGAIN we urge every one back home who owns or operates Briggs & Stratton 4-cycle, air-cooled gasoline engines, to keep them at top efficiency.
Not only will extra service be gained, but the critical materials that would be needed in unnecessary repairs are saved.
Whether these engines are on farms, in industrial plants, on construction or road jobs, or in army camps — they deserve extra care right now.
Keep them clean, adjusted, well lubricated, and in repair. Your nearest dealer or Briggs & Stratton Service Station will be glad to help you.
BRIGGS & STRATTON CORP.
MILWAUKEE, WIS., U. S. A.
Buy Your Victory Invest in WAR BONDS
4 CYCLE
BRIGGS & STRATTON
GASOLINE ENGINES

Meet today's transportation demands with

Scotchlite

REFLECTIVE SIGN SHEETING

24 Hour Visibility

by DAY

by NIGHT

Help assure the safe transportation of industrial war workers and essential war supplies by marking all highway traffic hazards and directions in your city with "SCOTCHLITE" signs.

Night and day legends and warnings made with "SCOTCHLITE" are clearly visible and easily read at maximum reading distance—so necessary in meeting today's 24-hour transportation requirements.

"SCOTCHLITE" is easily applied to painted wood or metal signs without the aid of special equipment or heat, thus minimizing installation time and cost.

Available in silver, white and yellow colors and in roll form of varied widths. For your convenience in making a fast test, we have signs already made up at reasonable cost. Why not write for further information and prices on our sample offer.

Gentlemen: Dept. AC 543

Kindly send further information and prices on "SCOTCHLITE."

Name

Address

City

State

MINNESOTA MINING & MANUFACTURING CO.

Saint Paul, Minnesota

Branch Offices: BOSTON · BUFFALO · CHICAGO · CINCINNATI · DETROIT · HIGH POINT · LOS ANGELES · NEW YORK · PHILADELPHIA · SAINT LOUIS · SAN FRANCISCO · SEATTLE

3-M PRODUCTS AIDING WAR PRODUCTION

ABRASIVE PAPER and CLOTH PRODUCTS
"SCOTCH" TAPES
ADHESIVES
WAX and SEALER
LAPPING and GRINDING COMPOUND
CUTTING and POLISHING COMPOUND
FIBRE PACKING
"SCOTCHLITE"

WHICH OF THE CATALOGS WOULD YOU LIKE?

(Continued from page 21)

Airport Drainage Pipe

644. Of special interest to municipal airport officials is the Armco corrugated metal pipe. This flexible pipe is especially suited for airport use as it resists crushing, cracking, or disjointing under the impact of heavy loads and insures a dry, firm field with uniform support for runways and direct wheel loads. Write the Armco Drainage Products Association, 185 Curtis St., Middletown, Ohio, for its "Manual of Airport Drainage."

Valves and Hydrants

645. If you expect to maintain your water service during a possible air raid, you will need to give particular attention to your hydrants and valves. M & H Valve Fitting Co., Anniston, Ala., will furnish information on adequate valve and hydrant installations helpful in meeting this problem.

Water Purification Equipment

646. Water works officials will find of value the literature on the complete line of water purification equipment manufactured by Infilco, Inc., 325 West 25th Place, Chicago, Ill. Write today for your copy.

Timber Structures

647. The Timber Engineering Co., 1319 18th St., N. W., Washington, D. C., will send a reference booklet on 45 designs of timber structures making use of the Teco Ring Connector. This connector makes possible the use of timber in many municipal structures as it spreads the load over the entire cross-section of the wood and increases the strength of the joint. Write for a copy of this book.

Aid for Municipal Accounting Problems

648. Municipal officials will find of great help the service offered by the Burroughs Adding Machine Co. This company maintains a complete library with detailed information on methods, machines and procedures for all types of accounting work, and is ready to make available such information as is required to suit your needs. Write Burroughs Adding Machine Co., Detroit, Mich., if you have a municipal accounting problem.

Self-Priming Centrifugal Pumps

649. Bulletin No. 1041 of the Ralph B. Carter Co., Hackensack, N. J., gives detailed information and specifications on their full line of Humdinger self-priming centrifugal pumps. These include the all-purpose utility pump, light and heavy duty pumps, high pressure jetting pumps, electric drive pumps, diaphragm and plunger pumps. This booklet gives operating hints on these pumps, statistics, and shows a variety of places where these pumps may be used.

A Handy Air Compressor

650. Schramm, Inc., West Chester, Pa., will send its booklet "A Small Schramm Package for Many Uses" describing the Model 20 air compressor. This unit consists of an engine block with two power and two air cylinders, and is available in various types of mountings. This booklet shows various uses for this compressor, gives specifications, dimensions, and weights.

Street-Maintenance Equipment

651. The Connery Construction Co., 4000 North Second St., Philadelphia, Pa., will furnish literature on its full line of street-maintenance equipment including tar and asphalt heating kettles, spraying attachments, and pouring pots.

Clearing Obstructions in Sewers

652. City officials will find the catalog offered by the Expanding Sewer Machine Co., 108 East Walnut St., Nappanee, Ind., on their complete line of sewer cleaning equipment both interesting and instructive. Operators report excellent results with the root-cutter and sewer cleaner. The equipment can be adjusted to fit any sewer from 8 to 30 inches.

Aid for Post-War Sewage Plant Rehabilitation

653. Municipal officials busy preparing post-war plans for the rehabilitation of their sewage-treatment plants will be interested in the new 24-page bulletin 287 issued by Builders-Providence, Inc., 9 Codding St., Providence, R. I. This will be an aid in drawing up layouts and cost estimates for the control and chemical treatment of sewage and sludge. Write this company for bulletin 287.

Keeping Sewer Lines in Good Condition

654. The Champion sewer cleaner will help you keep your sewer line in good condition. This cleaner will make quick work of the many things that clutter up catch basins and highway culverts. Safety devices help to prevent injury to sewer mains or systems. Write Champion Corp., 4716 Sheffield Ave., Hammond, Ind., for literature.

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Two Unique Experiments in Planning for Post-War Urban Redevelopment

LAST month saw the launching of two "pilot studies" which it is hoped will demonstrate the value of new techniques in the replanning of cities to meet the needs and opportunities of the years to come.

The Buffalo Study

In Buffalo and Erie County, New York, the purpose is to show how local citizens' groups and officials can work with state and national organizations in urban planning for the post-war period.

The Erie County Post-War Housing Survey Committee, under the chairmanship of Carlton P. Cooke, Real Estate Officer of the Buffalo Savings Bank, was organized as one section of the Niagara Frontier Post-War Planning Council. The committee includes city and county officials, the chairman of the City Planning Commission and of the Municipal Housing Authorities of Buffalo and Lackawanna, officers of mortgage lending institutions, leading real estate men, architects, builders, social welfare workers, and labor leaders.

As soon as it began to function, the committee requested the assistance of the National Committee on the Housing Emergency, the regional offices of the National Housing Agency and of the National Resources Planning Board, and the New York State Division of Housing. The National Committee on the Housing Emergency has loaned the services of Gladys A. LaFetra, its Executive Director, to assist in mapping out a program of work and directing its initial steps. The National Resources Planning Board has made available the services of William H. Ludlow, Planning Technician, who has been in Buffalo working with the Niagara Frontier Post-War Planning Council since September, 1942. The National Housing Agency and the New York State Division of Housing are supplying factual data and post-war estimates on the over-all demand for housing and on the probable rent-paying capacity of the population. Both agencies will consult with the committee as its work progresses.

Buffalo Gets Cooperation of National Housing and Planning Bodies; Syracuse Aided by a National Magazine

The local committee has begun its work by intensive study of a central blighted area which has been selected as suitable for residential redevelopment. Carrying forward work started by the Buffalo City Planning Association, all relevant factors will be analyzed and suitable densities and rental ranges determined in the light of over-all estimates of the housing market and proper development of the entire metropolitan area. Within this framework, desirable schemes for redevelopment, including adequate community facilities and recreation space, will be studied in relation to financial possibilities in an effort to determine what financial interests, private and public, may be expected to participate in providing housing for various income groups. Methods of land acquisition, and land cost in relation to its use value, will be studied and recommendations made for coping with these problems.

Similar development studies will be made for suburban areas, including not only zoning and other controls, but it is hoped to devise means which will encourage developers to build efficient, modern neighborhoods for the anticipated market.

Syracuse Tackles Its Future

Syracuse and Onondaga County, New York, are commencing an ambitious job of planning, with the view to being ready after the war to take advantage of any opportunities that may arise for the utilization of capacities to produce and to build that might otherwise be wasted in idleness. Collaboration in the project has been extended by *Fortune* magazine, which outlines this unique journalistic undertaking in its May issue. *The Architectural Forum*, sister publication of *Fortune*, is also cooperating. General policies are being worked out by the Syracuse-Onondaga Post-War Planning Council, upon which is represented virtually every important group interest of the city and county.

In general charge of the planning activities is Sergei N. Grimm, Secretary and Executive Director of the Council, Executive Secretary of the City Planning Commission, and Director of the Syracuse Housing Authority. Russell Van Nest Black has been retained as Chief City Planning Consultant; with Hugh R. Pomeroy, President of the American Institute of Planners, serving as a Special Consultant; and Ernest M. Fisher, of the American Bankers' Association, as Chief Economic Consultant.

It is explained that the idea of such a project had grown out of a desire to reduce to more concrete terms some of the proposals set forth in *Fortune's* Post-War Pamphlet No. 3, "The Domestic Economy," and that it was important to select a city whose problems were characteristic of American cities in general so that the experience might have the widest possible application. But it was even more important that the city be aware of its problems and resolved to do something about them. *Fortune* explains that:

"There is nothing wrong with the people of Syracuse. What is wrong is that, like most of the rest of America's urban population, they are trying to force their twentieth-century way of life into a rigid nineteenth-century mold.

"It takes too long to get to work, too long to shop, too long to get to the park, too long to get out of town, too long to get in town, too long to get to school, to the train, to the airport. It costs too much in terms of wasted time, rubber, gasoline, and nerves to transfer goods, to make deliveries, to make business calls. It costs too much in terms of the city's single most important task—the growing of normal, healthy children. There isn't enough air, enough sun, enough open space in our big cities. There isn't enough privacy and what there is costs too much. There's too much noise. There is too much bustle and agitation, too little peace, dignity, and human warmth. . . . Part of the program represents a wise outlet for public funds. The greater part offers investment opportunities for private capital. In the Syracuse project the problems of re-employment, full employment, and city planning blend together, and thereby promise a mutual solution."

Water for Winchester

A Small Virginia City Settles Its Water Problems in a Hurry When an Emergency Arises

WINCHESTER, VA., has always had a water supply problem. Few of its residents can remember the time when they were not able to fall back on their water works as a topic of conversation when everything else had failed. Generally the weather is the most reliable standby. But Winchester also had its water supply—something needed to be done.

Not that the water supply had gone unnoticed from an engineering point of view. It hadn't. It had been analyzed, discussed, and reviewed by competent consultants ever since the turn of the century. When you looked into City Manager S. L. Grant's file on "Water Works — Development" you would find a fat and substantial space filled with thick, leafy documents. They represented the Council's frequently repeated practice of conscientiously retaining a consultant to make a survey and recommend needed changes. These would be duly presented to the people for approval, and for some reason or another, the recommendations would be consistently voted down. It was not that the water supply was so inadequate that it was dangerous, but it was low enough to be inconvenient, and everyone agreed "something ought to be done." However, with characteristic Virginia deliberateness, they always decided to wait until they saw how things looked a little later.

That was the situation up until 1940. The water works had even grown occasionally to meet the expanding population and industry in town—not enough to be adequate—but sufficiently to keep a lagging pace. However, it was just about this time that Winchester, along with the rest of America, began to really feel the effects of the present global war. Her industries started to grow more rapidly and to take on a significant aspect regarding the preservation of our democratic way of life. The demands for water increased with disconcerting spurts, and the water supply began to hit the bottom of its resources with resounding thumps. So the town again called for engineering advice.

Action Required

This time it was M. H. Klegerman of the Alexander Potter Associates, New York—a firm not new to Winchester, having designed its original system 50 years ago. Mr. Klegerman looked the situation over rather hurriedly and delivered a rather pointed report in February, 1942. He presented figures indicating that the yield of the springs, which had been their source of supply for so many years, was decreasing sharply as a result of a series of dry years. He also pointed out evidence of increased water requirements. During 1941, he stated, 77,000,000 more gallons of water were used than during the highest, previously recorded peak. During the last five years, the industrial use, alone, had jumped 67 per cent. He pointed out the inescapable fact, that, either the supply would have to be increased, or Winchester's important industries would be forced to curtail operations. As a matter of fact, one of the city's chief industries had just attempted—at considerable cost, but without success—to develop a well supply of its own, fearing the city supply would be inadequate.

In discussing possible sources, four supplies presented themselves—all of them springs. Of these, one showed characteristics that appeared definitely superior. Its supply seemed ample; it had a fairly favorable location; its yield during drought years was good; and it was relatively free from right-of-way difficulties. Consequently, the engineering report recommended its use and strongly urged that action be taken immediately.

Preliminaries Eliminated

Officials of Winchester, although they previously might have deliberated over the problem for years, responded in grand order when the emergency presented itself. Ordinarily, the legal and municipal manoeuvering, which precedes actual construction, will delay any project for a minimum of a few months; and with the added existent priority restrictions producing further complications, an even longer delay could normally have been expected. However, Mr. Klegerman reports that the Council ordered him to begin drawing plans and preparing contract documents at once; and

This picturesque little spring, used to strengthen Winchester's water supply, has a background dating to Revolutionary days. Officials insisted that the original appearance be retained.

How the plant looked after construction. The design was based on a colonial type of architecture with the same stone masonry construction used.

added that he was not to worry about how they, the Council, were going to raise the money—whether by an election authorizing bonds or some other means. If the local war industries were to be delayed in production work, they said, it would not be because of a water shortage.

"I still am not entirely clear on what happened down there," says Mr. Klegerman. "I only know that some way or another the money became available when we needed it."

Develop New Spring Supply

The project involved the development of what is known in Winchester as Fay's Spring. It had a normal flow, as determined by the Virginia State Commission on Conservation and Development, of 2,140,000 gallons daily, with estimated flow through drought years amounting to approximately half this amount. Since the city required only 1,000,000 gallons of water daily, there would still be sufficient remaining to supply water for riparian uses, such as cattle watering.

About 2½ miles of 10-inch diameter pipe line were required—the water being pumped against a total head of 271 feet. Approximately 45 feet of this represents friction loss, and with the balance represents the difference in elevation between the spring and the city.

The plans called for the directing of the water to a covered chlorine contact chamber, with a displacement of 50,000 gallons, and thence to a small suction well from which the pumps would operate. The pump house consists of an attractive stone masonry structure, situated directly over the spring. The spring and the pump house are located in an area of interesting historic revolutionary background; and some apprehension was expressed by Winchester residents as to the possibility of a building being constructed that would not harmonize with the locality. Accordingly, the designers carefully planned the pump house's architectural features along old colonial lines. This fits nicely into modern wartime construction work, since it calls for a minimum of steel and utilized stone masonry wall construction with rough-hewn timber beams. The chlorine contact chamber was also constructed of stone masonry walls and brick baffle walls. Reinforced concrete, however, was used in the floor and roof of this chamber.

To add to the attractiveness of the locality, the overflow from the spring flows to a small pond, used by the owner as a duck pond. The entire area resembles an attractive, well-maintained estate.

Original plans called for the use of some substitute pipe for the supply line. To save precious metal, the engineers recommended the use of asbestos-cement pipe, and, failing to obtain that, investigated a treated wood-stave line. However, its extensive use in war production made it even more difficult to get than the customary pipe material. Therefore, the city applied for, and was successful in obtaining, cast iron pipe for this line. To conserve material, however, a light-weight cast iron pipe, conforming to Federal Specification No. WW-P-421, Type F, was adopted. This, like AWWA pipe, is pit-cast, but has a thinner wall section.

The pumping installation consists of two Pomona vertical turbine type pumps of 510 gpm and 290 gpm capacity respectively; the combined capacity, when both are operating, is 700 gpm. The units are driven by a 40 hp and 25 hp motor respectively.

Water delivery by this station is measured by a Sparling 8-inch flanged, tube meter, provided with indicating-totalizing-recording equipment.

A Wallace and Tiernan chlorinator administers a 30-minute contact to the raw water. This is followed by dechlorination using "Esotoo Dechlorination Flow Control" unit applying liquid sulphur dioxide.

The entire project is now complete and in operation. Although the supply was increased by 1,000,000 gallons per day, the cost of the work, despite the fact that it was designed and constructed as a wartime rush order, was only $58,000.

The Only Thing Left Is to Build It

Winchester, Va., Lays Practical Plans for Its Post-War Sewage Treatment Plant

WINCHESTER, VA., is planning its post-war construction of sewage treatment facilities in a way that should be the model of every city in the country. This city realizes that there is more to a municipal improvement than just the construction.

Winchester not only knows that it has a sewage treatment problem, but it also knows how tough, if not impossible, a job it would be to build such a project during wartime. City officials, however, realize that the priorities influence only the material—not the preliminary studies, the plans, the specifications and all the other details that must be performed before a shovelful of dirt is turned, a brick laid, or a piece of equipment installed.

And Winchester is getting these out of the way now.

This quiet, industrious little southern city has not overlooked its obligation to solve this civic problem. Perhaps facilities have not been as complete as sanitation experts would have liked; however, the little municipal sewage treatment plant was far from inadequate.

Over 30 years ago, when sewage treatment as we know it today was young, the city installed several sand filter beds on the banks of the Abrams Creek in order to avoid polluting this stream. However, these beds soon were outgrown and were supplemented by an Imhoff tank in 1915. Soon thereafter, trickling filters were constructed to replace the sand beds, and a secondary settling tank was added.

Again, in 1931, the plant was enlarged to accommodate increases in population growths. This consisted of an additional Imhoff tank and more trickling filter area. Revisions were also made in the dosing arrangements. The open sludge drying bed also has been increased from time to time.

These additions, however, did very little to overcome the unusual difficulties present in the treatment of the Winchester sewage, resulting from certain of its industrial wastes, notably that of the appeal by-products industries.

It was, therefore, not surprising that back in July, 1941, the Common Council recognized this problem, which had been even more aggravated due to a decade of substantial growth of its industries, and fully realized that the city had definitely outgrown its small and inadequate plant.

Study of the sewerage problem is interesting in itself, but nevertheless a routine matter. Everyone recognized the danger of the war. However, this only emphasized the importance of improving plant facilities as soon as possible to assure that public health facilities would be in order. And on October 7, 1941, M. H. Klegerman, consulting engineer with Alexander Potter Associates, New York, delivered his report and recommendations to the Common Council.

Pearl Harbor Decision

Two months later to the day, America found herself no longer gearing for defense. From that day forward she was building for battle. At this point the city had two choices. It could either drop the entire affair as a war casualty, or intelligently recognize this as only a postponement and continue to prepare the project for construction. This problem of sewage treatment was still there, officials realized; the work of preparing plans, specifications and acquiring property for the new plant were all things that needed to be done before the project could be built; and their performance would in no way hamper prosecution of the war, or use critical war material.

Thus in February, 1942, the mayor and his council again met in session to receive a special report of the Sewer Committee; and, after discussing the plant among themselves, they decided to instruct their engineer to proceed with his studies and design in order that plans and specifications could be fully prepared and in their hands, and the project could begin as soon as the war ended.

Is Financial Benefit

"This action by Winchester's council certainly was a boon to the engineering and design features of the plant," stated Mr. Klegerman. "Every engineer likes to be proud of his work and when he is allowed to design a project without the need of working under the stress of a deadline, he is able to give the city a plant that is better designed and that will operate more efficiently. It is easier for the engineer and of definite financial benefit to the city as well."

An added advantage, Mr. Klegerman points out, is that of cost estimates. Estimating the probable cost of a plant is always difficult—particularly when it must be prepared before the plans are fully completed in order that bond elections may proceed smoothly. With the final plans prepared and on file, it will be possible to more closely judge these costs by submitting the plans to prospective bidders.

Design Problems

There are several main difficulties with the city's existing plant. One is the inability of the present facilities to cope with the type of wastes which it now receives. Indicative of the difficulties resulting from the presence of these wastes is the fact that during the "apple season," composite samples of the sewage reaching the plant may have suspended solids values of 450 ppm and biochemical oxygen demand values in the order of 1,000 ppm, accompanied by extreme fluctuations in pH values. Another difficulty in the entire sanitation problem confronting the city is that the present plant does not provide for the treatment of the wastes from the city's important woolen mill industry, nor of the wastes from one of its main laundries. These represent a volume of about 20 per cent of the total city sewage and have a strength of several times that of domestic sewage. At present they are discharged untreated to the same stream that receives the effluent from the present treatment plant.

The example of this small city's energetic and foresighted handling of water and sewerage problems shows how quickly a municipal improvement can progress with decisive action on the part of its officials.

It furthermore shows in a practical way how intelligent and thoughtful planning can be put to work during this wartime period.

There are other difficulties and limitations also. Its poor location prevents it from serving a flourishing section of the city. Its awkward arrangement makes it difficult to enlarge to handle either the added domestic or strong industrial load.

Small Receiving Stream

The plant itself demanded careful study and observation for several reasons. The receiving body of water is small, requiring a thorough treatment of the sewage to avoid pollution. Furthermore, the large number of industries introduce a strong sewage, varying in character and difficult to treat. Balancing influences of certain wastes, as acid fruit wastes and alkaline laundry wastes, require some consideration. The industries introduce the added ticklish problems of pre-treatment, flow regulation, and distribution of costs.

To meet the difficulty of treating the industrial wastes, the design calls for the use of two-stage high-rate filters and recirculation of a portion of the sewage in line with the now familiar "bio-filtration" process. This recirculation tends to iron out excessive changes introduced by the industrial wastes, and enables the plant to produce a uniform effluent and gives it the ability to withstand greater shock loads. Furthermore, the shallower depths of these filters give the plant more favorable hydraulic characteristics. Separate sludge digestion is also included in the design in place of the old Imhoff tanks. Preliminary aeration facilities to remove grease and to assist in retarding septic action are to be provided, as well as means for comminution of screenings. During the fruit packing season, comminution of solids is particularly necessary. Shallow settling tanks will proceed the digesters. These tanks will be mechanically equipped for continuous sludge removal.

Sludge Gas

The use of the sludge gas illustrates one example of the way careful design was developed. Although Winchester has a normal population of around 13,000, its industrial wastes have characteristics of a population that is much greater. On the basis of suspended solid matter, the mill wastes are equivalent to that of a population of about 32,600 people. On the basis of grease and fat content, this figure jumps to the astronomical height of 400,000, and careful engineering is required in order to fully capitalize on the economic asset possible from this sewage gas. Normally, engineers would consider the utilization of gas, in a city this size, of questionable economic value and would be reluctant to recommend its use.

No Priorities on Preliminary Studies

Winchester's example in post-war planning actually shows sound and logical thought. It is hoped that this same type of reasoning will be followed by every city, when considering municipal problems that need to be solved. Priorities, it should be emphasized, restrict only the delivery of materials. They do not restrict the preparation of plans, specifications, and the many other preliminary operations that must be performed before any project can be constructed.

Wartime Obligations of a Small Electric Plant

MANNING, IOWA'S attractive municipal power plant.

Careful maintenance and operation help the thrifty municipal electric service at Manning, Iowa, carry its own war load and economically serve its community.

IF, as Secretary of Agriculture Wickard says, food will win the war, then the municipal electric plant at Manning, Iowa, is doing its part. This small, Middle-Western town, with a population of 1,780, has its own not-so-spectacular but nonetheless vital war work consisting of a new egg-drying plant and several small food-processing industries. All of these are powered by the municipal diesel electric plant.

Manning's electric plant is not particularly old. The town began generating its own power back in 1937 when officials purchased the existing facilities from the Iowa Public Service Company. With it they acquired the original two 400-hp, 225-rpm De La Vergne diesel engines with a total generating capacity of 540 kw. Under municipal management, coupled with a general lowering of rates, the load immediately grew sufficiently to require an increase in the plant capacity. To meet this demand, town officials selected another engine of the same make, 750 hp in size and slightly higher in speed. This unit raised the capacity of the plant to 1,040 kw.

New Responsibilities

"The war has placed a real responsibility on us here in this plant," says Superintendent A. D. Wiese. "We used to balance maintenance costs against the cost of new equipment but we don't do that any more. Maintenance has passed the point of being a fine art and has emerged into a sort of religion. We used to boast about our record of continuous service, but now we realize that it is part of our wartime obligation."

A Renuoil filter reclaims the lubricating oil every week. Mr. Wiese states, instead of every two or three weeks as was the pre-war practice. Oil gages have been installed on both the "in" and the "out" lube oil engine pipes to show the pressures at all times. This is in addition to the Alnor safety alarms on the engines. A 5,000-gallon Crane water softener treats all water used for cooling the engine. The jacket water itself is cooled by raw water circulating through a Schubert Christy and a Marley atmospheric cooling tower. Westinghouse switchboard equipment controls the plant and the electrical distribution.

One of the interesting features of the plant is the method of handling the fuel oil during cold weather. The method here is to pre-heat the oil during the cold part of the winter by bypassing it along the exhaust pipe. This pipe is contained inside the asbestos covering and aids considerably in operating the engines when normally the oil would be thick and hard to handle. For summer use, the fuel oil is taken directly from the oil tanks without pre-heating.

Manning's municipal plant has shown a thrifty financial growth during the five years that it has been in operation. During this period, $44,000 in bonds have been retired and all interest payments have been met promptly. Operating expenses and extensions all have been financed out of current income, and the plant has been able to maintain a comfortable balance of $12,000 in cash and supplies on hand.

Domestic rates for electricity start at 6.7 cents for the first 30 kwhr, 3 cents for the next 170, and 2 cents for all beyond, with a minimum of $1.00 per month. Manning offers an off-peak water heating rate of 1½ cents per kwhr with a $1.00 minimum.

Ownership Action by Kearney, Nebr.

CONDEMNATION action instituted by the city of Kearney, Nebr., against the Consumers Public Power District has placed a value of $271,000 on the electric distribution system in the city. An offer by the city to buy the system at a value of $225,000 had previously been rejected. A subsequent valuation by the district was named at $1,124,000. Burns and McDonnell, Engineers, had presented a figure of $212,000 as an invoice of the property.

This decision has the added clause that requires the city to purchase power from the district for a period of 10 years. Failure to meet this obligation will result in an additional charge to the city of $25,000.

The States in Post-War Planning

Governors and Legislatures Facilitate Forethought and Action at Various Levels of Government

By Frank Bane
Executive Director, Council of State Governments

THE paramount problem of interest and concern to all the states is the winning of the war in the shortest possible time. To this job they have dedicated all of their resources and all of their facilities.

The states are concerned also with their part in post-war reconstruction and development. Representatives of the states—governors, legislators and other officials — are fundamentally agreed that the states must prepare, in collaboration with business, agriculture and labor, and the other levels of government, for the exigencies of the post-war period.

Speaking before a midwestern conference of state representatives (April 2), called by the Council of State Governments to discuss these problems, Governor Dwight Green of Illinois, declared:

". . . I am firmly convinced that it behooves us, as governors and as responsible officials of the sovereign American states represented here today, to plan *now* for that future for which we are fighting. A planless peace—a planless future—can mean nothing but chaos and extreme disappointment and unhappiness for the 135,000,000 patriotic Americans who have fought so courageously and sacrificed so much to achieve a victory for America."

Governors Urge; Legislatures Act

The importance of state action was stressed by most of the governors in their messages to the legislatures in January. Thirty-two of them emphasized this responsibility and submitted some three-score proposals involving post-war public works, highway and housing construction, and rehabilitation of returning servicemen, according to a recent study by the Census Bureau.* Many of these proposals have since been written into the statute books. Many of the governors likewise recommended the adoption of enabling laws to permit local governments to invest surplus and other funds for post-war use.

The forty-three state legislatures which have met so far this year have considered much planning legislation. Special post-war planning agencies have been created by at least five of them—Idaho, Indiana, North Dakota, Oklahoma and Oregon—for studying the problems of agriculture, industry, state resources, and the needs of returning servicemen and the civil population. Similar agencies already exist in many of the states, including Massachusetts, Minnesota and New York, while planning bodies have been strengthened and reinforced in still others.

Reserve Funds for Post-War Construction

Of equal importance has been the legislation permitting the building of reserve funds for post-war use. The Illinois legislature was one of the first this year to make such provision. Surplus funds in that State may now be invested in federal obligations. Arkansas, Iowa, Maryland, Michigan, Montana, Nevada, North Carolina, and North Dakota are among the states taking similar action. Michigan earmarked $20,000,000 as the initial step in building up a reserve of $50,000,000. North Carolina has set aside $20,000,000 to which the governor may add from future surplus, and North Dakota has started a fund with $300,000. An Indiana surplus of $31,000,000 is entering into the plans of the post-war agency in that state, although the legislature has not specifically set the amount aside for the purpose. Post-war public construction in the states will also benefit from the freezing of earlier appropriations made for the purpose in Iowa, Michigan, and Montana.

The power to hold their surpluses and other current income in reserve for post-war expenditure has been granted since January to city and local governments by many states, including Arizona, North Carolina, North Dakota, and Rhode Island. These are in addition to the nine states—California, Kentucky, Massachusetts, Michigan, Nebraska, New Jersey, New York, Oregon and Washington—which had removed the restrictions against accumulation of funds by local authorities for post-war expenditure prior to January 1943.

The measures undertaken by the states have been with the tacit assumption that definite promises and commitments are undesirable, but that forward thinking and anticipatory preparation are necessary to survival. Broadly speaking, the duties of government have been seen to involve (1) the creation of a favorable financial position among state and local governments which will enable them to expand their activities after the war; (2) the coordination of agencies and policies on the federal, state, and local levels; and (3) the preparation of a reservoir of plans and detailed long-range programs from which to choose as the needs of the post-war period may determine.

Regional Meetings

These same ideas have been the basis for the series of regional meetings sponsored by the Council of State Governments, at which representatives of government have gathered to consider their common problems *vis-à-vis* post-war development and reconstruction. The first of these meetings was held in Chicago (April 2-3) for the states of the Midwest, with some 200 representatives in attendance. Other meetings were scheduled for April in New York City, Atlanta, and San Francisco.

In suggesting methods of approach to those problems which will require governmental activity — problems of unemployment, taxation, public works, construction, housing and urban redevelopment, rehabiliation, education, state resources and land use, and others —the Council has recommended continuing cooperation between the state and local agencies, as well as with agricultural, industrial, and labor groups affected. The need for adequate machinery for the development of concrete programs and for the passage of enabling legislation to permit such programming has occupied a prominent place among the Council's recommendations. The states which already have acted on these suggestions attest to their practicality.

Speaking before the Conference Committee on Urban Problems, March 31, Holden A. Evans, Jr., Executive

* U. S. Bureau of Census, "Governors' General Messages to State Legislatures in January, 1943, March 1943, pp. 2-5.

Secretary of the New York State Post-War Public Works Planning Commission, discussed the progress of his agency which, in addition to studying state programs and maintaining contact with federal agencies, is required to assemble information dealing with municipal postwar projects in the state. The communities of New York State have cooperated fully with the state commission, and together have created a reservoir of municipal projects totaling about $290,000,000, the costs to be shared by the state and the localities.

Programs adopted in other states will, doubtless, be influenced by local conditions. The needs of the agricultural states will require treatment quite different from those of the industrial and commercial commonwealths. But the states, uniformly, are alive to the necessity of making suitable domestic arrangements now, in order to avoid catastrophe in the post-war years. They are cooperating—and will do so increasingly as present deliberations take the form of action—with the other levels of government to absorb the shocks of demobilization—of the transition from war to peace.

City Manager Appointments

W. C. DRAGER, assistant manager and purchasing agent of Beloit, Wisconsin, has been appointed city manager of Fernandina, Florida, effective April 15. He fills the vacancy created by the promotion of R. B. MESERVE to Marianna, Florida.

R. A. LEMIEUX, former municipal engineer and secretary-treasurer, Sillery, Quebec, has been appointed city manager of Arvida, Quebec. He replaces D. J. WYBER, who has resigned to devote full time to his position with the Aluminum Company of Canada, Ltd.

ELTON B. SHERWIN, vice president and treasurer of the California Western States Life Insurance Company, has been appointed city manager of Sacramento, California to succeed JAMES S. DEAN who resigned to become deputy state director of finance for California.

RICHARD H. SMITH, city manager of Phoenix, Arizona, since July 1942, has been appointed city manager of Ventura, California, effective May 1, 1943. He fills the vacancy created by DON D. MCMILLAN'S promotion to Alameda.

FRANK B. HOUSEL, city clerk, has been appointed first city manager of St. Louis, Michigan effective April 12.

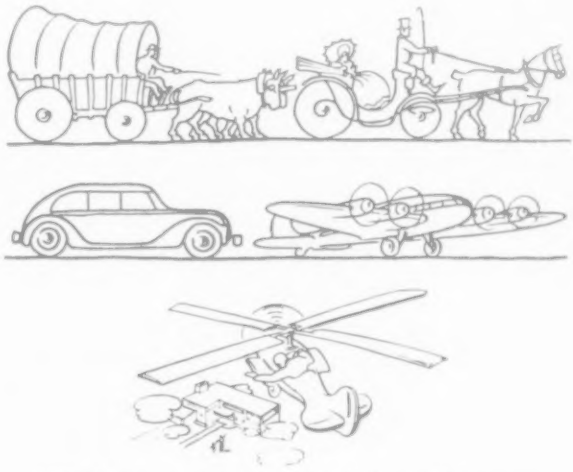
CLARENCE E. RIDLEY,
Executive Director, International City Managers' Association.

Must We Plan Our Future Cities for Recurring Wars?

By ROLAND A. WANK, A. I. A.

IN the midst of a world war one cannot avoid wondering whether the life-and-death facts of warfare will lead to lasting changes in the principles of town planning. To quote Dorothy Thompson's taxi driver, "the war may last a lot longer than the duration." In the judgment of some responsible members of the military services, all future construction should take into account the possibility of sudden attack, anywhere, for an indefinite period.

On the other hand, peacetime uses of the airplane should also receive passing reference. Not because its use will affect the competitive position and relative growth of population centers, nor because aerial commuting may affect their detailed layout; but because



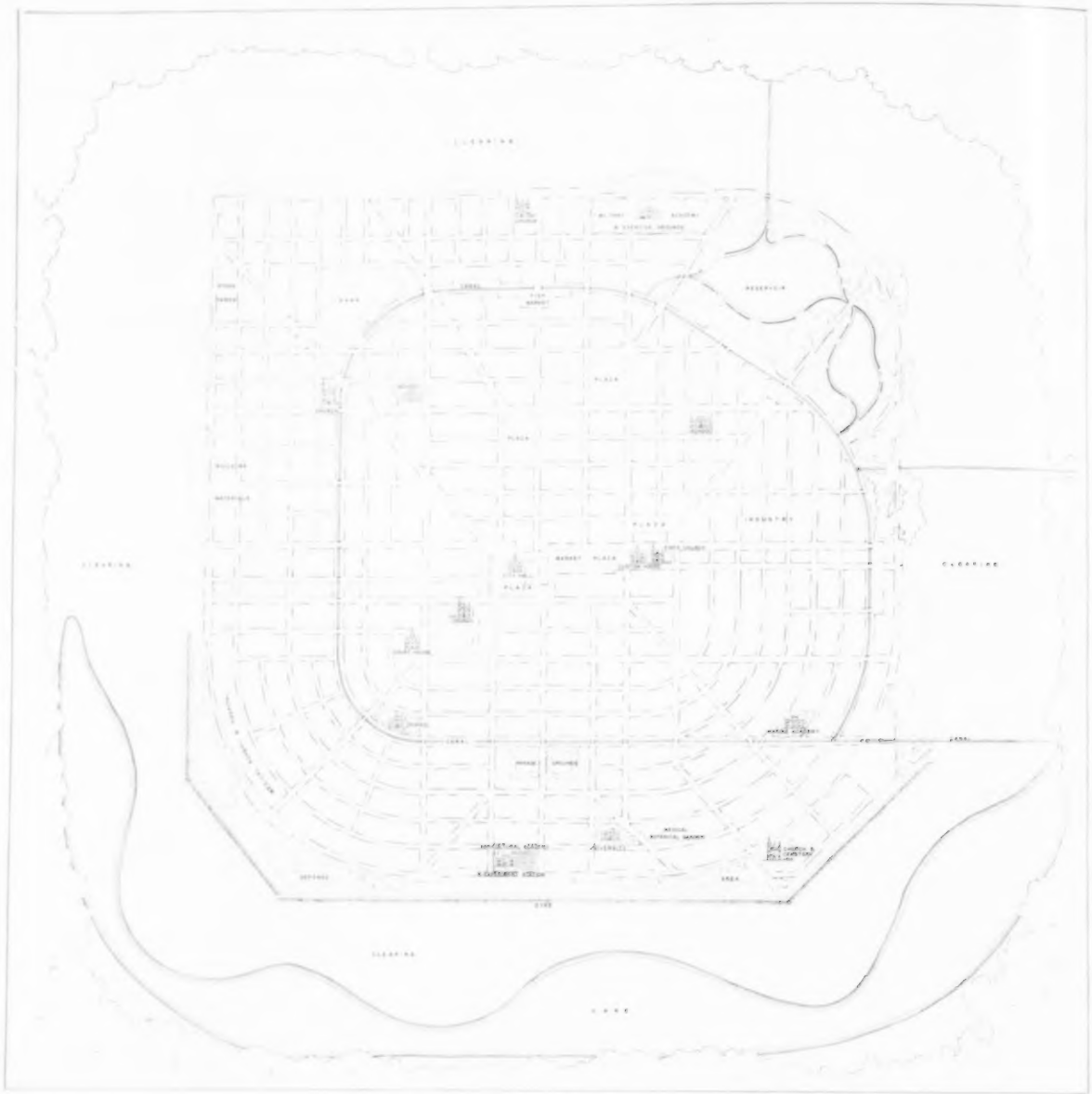
Will the future evolution of the airplane make current principles of city planning obsolete?

Now design for merely staying alive differs a lot from design for living. Assuming the constant danger of aerial bombardment, the best defense of towns and cities would be utmost drabness of detail and lack of identifiable organization. Vital structures, normally focal points of planning as symbols of civic pride or productive power, would burrow underground or otherwise pretend to be non-existent. Sites endowed with special advantages, such as hilltops, waterfronts, highway intersections, would be shunned like pestholes. Should this philosophy be accepted to rule the town planning practices of tomorrow?

Humbly admitting the possibility of error, it is contended that there is no need — yet — to throw our hard-won heritage overboard. Future necessity depends upon the kind of world order which will follow the phase of open warfare. If it rests on a working degree of satisfaction among all peoples, with a light police force to check a few recalcitrants, mankind can return to its main task of building civilization. If it is an uneasy peace maintained by sheer brutal force, we will indeed live under the restrictions of an armed camp. But if that comes to pass, we may stop worrying about planned communities.

even the generalized approach of this article should recognize the undeniable possibility that once technical improvements place planes on a par with automobiles for all-around utility, our entire concept of settlement patterns may change with a far-reaching interfusion of town and countryside. All current principles of city planning would then be obsolete. The lay public, with its often accurate intuition, expects some such development; and new aircraft designs, now shrouded in military secrecy, may promote it. Still, on the basis of facts now known about the characteristics of planes, their dependence upon weather, and the requirements of their landing fields, it does not seem practical to do more than place this problem on a shelf—preferably on a conspicuous one where it can be kept under constant observation.

—From "Planned Communities: A Speculative Survey of Their Future," in *Architectural Record*, February 1943. Reprints available from THE AMERICAN CITY, 10 cents. See also "The Airplane, City Planning, and World Peace," page 5.



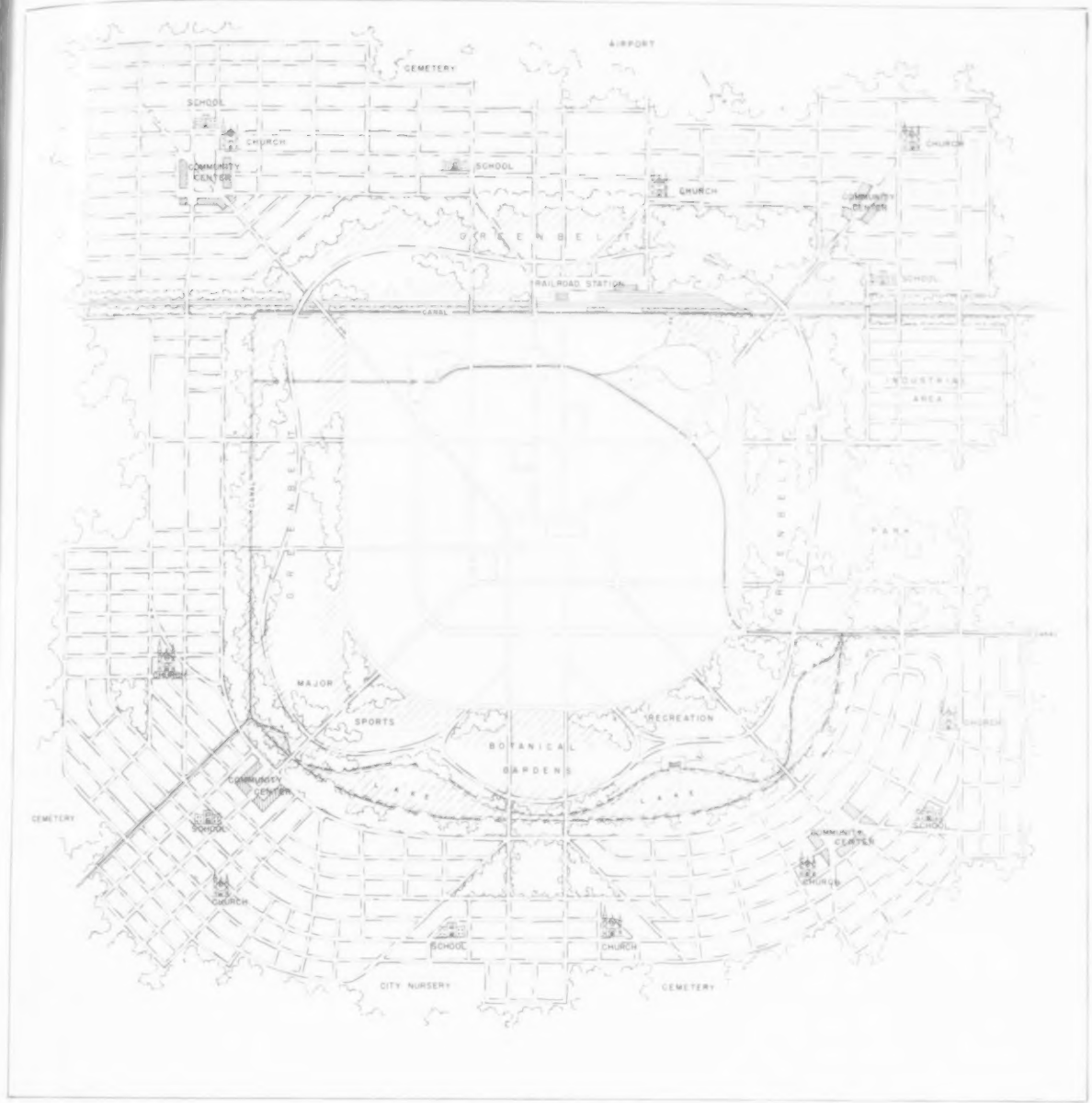
The original city of "Molleboon"

Town Planning Ideas

By JAC L. GUBBELS
Director of Urban Planning
Texas Highway Department,
Austin, Texas

A CELEBRATION known as the "Last Stand" is held annually in the city of Molleboon, for in 1667 on the 28th day of August the enemy was forced to retreat and abandon its invasion as it was unable to capture the town or to disrupt its supply lines.

In the original construction of the city it was anticipated that invasion attempts would be made, and adequate protective measures became a part of the layout. Surrounding the city, a strip of land approximately half a mile in width was acquired and cleared of all timber. Along the outer edge of this clearing an irregular-shaped lake was excavated and the excess earth used to build a dyke along the inner edge of the clearing next to the city. Thus, for an enemy to reach the city it was necessary first to cross the lake, then an open clearing, and finally to storm the dyke. The northern part of the city was so constructed that it could be flooded by adjacent high waters which assured a route for flat barges to bring in necessary food supplies. The lake around the clearing was connected with flowing canals which made possible an abundant supply of clear, fresh water. From a series of open plazas within the city, wide streets radiated in spoke-like fashion to the surrounding dyke and clearing. These radial streets thus provided direct routes



Later development of "Molleboon"

# of an Old Dutch City

—Editorial Note.—The community described in the accompanying article is the town in Holland from which the author emigrated to America years ago. As the sketches are drawn from memory and are somewhat idealized, an old nickname of the town, rather than its real name, has been used.

over which men and supplies could be transported quickly to any point of the city under attack.

This planning for protection against enemies became in later years a profitable asset to the city and the making of a model town, economically correct and beneficial. For example, the dyke has long since been removed and the soil used to fill in low areas and submarginal lands; the lake improved for recreation and scenic purposes; and the clearing developed into parks with drives, footpaths and bridle paths, botanical gardens, and many other cultural aspects.

The large park area was reserved as community property, and it now presents a great contrast to the solidity of development within the city proper by offering many functions to make the city a livable one. The cool, fresh air of the greenbelt is naturally circulated throughout the city by means of the radial canyon-like streets, and the park area, or greenbelt, is in easy walking distance of any part of the city—as evidenced by the countless number of baby carriages being pushed through the parks by nurses, mothers, and sisters.

When the inner city was built up, extension took place along the outer edges of the park, and each new development was connected with the city proper by major ar-

(Concluded on page 75)

Public War Housing Progress

By Herbert Emmerich
Commissioner, Federal Public Housing Authority

SUBSTANTIAL progress has been made in the provision of public war housing during the first year of the Federal Public Housing Authority. During the year 183,000 units of all types were completed. For the three-month period ending February 28, 1943 alone, 92,000 units were completed, or more than were finished during the whole period prior to the formation in 1942 of the National Housing Agency, of which FPHA is one of the three main constituent units.

This progress was made in the face of many difficulties. The first of these was the disorganized and conglomerate nature of the program at the time of the formation of FPHA. On February 28, 1942 the war housing program consisted of 279,000 units. Responsibility for constructing these units was diffused over at least eight agencies and divisions, with no one having as much as one-third of the program. There was, furthermore, little or no uniformity of policies and procedures. Thus, FPHA was confronted at the outset with a vast job of overhauling and organization. It was necessary, as the figures presented below will indicate, to start in low gear and admittedly with much screeching and groaning.

By the end of the year, however, the program was moving into top speed and all public war housing, with the exception of that on military and naval reservations, had been brought under the jurisdiction or control of FPHA. Actually 87 per cent of the war housing program is under FPHA and 13 per cent under the War and Navy Departments. All of this sorting out of jurisdiction and the molding of a unified organization had to be done during a period when the work-load on public war housing more than doubled.

Agreement with WPB

Progress was made also in the face of a serious shortage in critical materials and a policy for distributing them which seemed at times destined to halt construction altogether. By the end of 1942, after extended negotiations, an agreement was reached with the War Production Board which promises to relieve much of the past difficulty. Under this new arrangement a given quantity of materials is allocated each quarter to the National Housing Agency, for which it extends a blanket preference rating of AA-3. The system of allocation and the high rating accorded housing seem to be adequate to meet construction needs for the foreseeable future.

It was recognized by the FPHA at the outset that decentralized operations and the extensive use of standard building plans were prerequisites to construction progress. Ten regional offices were immediately set up and moved to the field. These offices were given real authority to handle virtually all construction and management operations—operations which in the past had to be cleared through the central offices in Washington of the agencies which now are all consolidated into the FPHA. Architects and engineers were set to work at once devising standard plans and specifications—with the modifications necessary to meet the various climatic conditions encountered. It was primarily through the development of these standard plans that the highly beneficial arrangement with the War Production Board was made possible.

Herbert Emmerich

Twelve Months of Accomplishment

Probably the most impressive way to get a clear picture of what has been accomplished during this year of birth pains and extreme stresses is to examine the record of progress:

STATUS OF PUBLIC WAR HOUSING PROGRAM

	Feb. 28, 1942	Feb. 28, 1943
Total program	279,000	604,000
Units not under construction	96,000	90,000
Units under construction	93,000	241,000
Units completed	90,000	273,000

UNITS STARTED AND UNITS COMPLETED BY QUARTERS

	Units started	Units completed
March-May, 1942	83,000	27,000
June-Aug., 1942	66,000	22,000
Sept.-Nov., 1942	76,000	42,000
Dec., 1942-Feb., 1943	106,000	92,000
Total	331,000	183,000

Although the rate of progress for the first six months of the year was low, it was not disappointing. This was the period when the ground was being prepared which made possible the tremendous expansion which occurred in the third and fourth quarters. That the foundations were well built is witnessed by the fact that the effects were cumulative. Units were placed under construction during the fourth quarter at a rate of 50 per cent greater than in the three previous quarters. The progress in completions is even more encouraging. In the third quarter completions were at a rate nearly double that of the first and second quarters. Completions in the fourth quarter again doubled the rate in the third quarter, and as a result fourth quarter completions more than equaled those in the three preceding quarters. It is expected that from here on the fourth quarter rate of about 30,000 completions per month can be maintained.

Payments in Lieu of Taxes

Estimated payments in lieu of taxes to local governments on public war housing projects for the period from January 21, 1942, when the Congressional provision for such payments went into effect, through the calendar year 1943, will amount to $16,525,000, FPHA estimates. This includes some payements which will be made in 1944.

For low-rent projects owned by local authorities and occupied by low-income families, the policy of making payments in lieu of taxes has been liberalized by FPHA. This has added over $332,000 to local tax treasuries in the 120 cities in which local authorities have low-rent projects.

Getting Ready for Federal Aid in Urban Redevelopment

The "Hansen-Greer Plan," 1943 Version, Set Forth by One of Its Authors

By GUY GREER

Three proposals for the post-war redevelopment of the slums and blighted areas of American cities, with substantial federal aid, are receiving widespread discussion. These are the so-called Hansen-Greer plan, outlined in a 1942 pamphlet entitled "Urban Redevelopment and Housing," published by the National Planning Association, Washington, D. C.; the Federal Housing Administration's plan presented in its "Handbook on Urban Redevelopment for Cities in the United States"; and the "Proposal for Rebuilding Blighted City Areas" of the Urban Land Institute of Washington, D. C.

Features of special interest to municipal officials, in the latest version of the Hansen-Greer plan, as presented by Mr. Greer at the 1943 Annual Convention of the Mortgage Bankers Association of America, are abstracted in the accompanying article.

HOW shall we go about getting organized and started toward the post-war rebuilding of our slums and blighted areas?

First, the rank and file of the electorate in the towns and cities must become aware of the problem; for there is good reason to believe that the average citizen in most communities has only the vaguest notion, if any, of what is fundamentally wrong and what would be required to put it right.

Manifestly this state of public opinion will have to be changed if any large program of urban redevelopment is to be undertaken after the war. The people must be made aware of the nature and the seriousness of the problem.

The next step, which should be taken simultaneously with the first and in fact as a part of it, must be a comprehensive survey and a study of the particular urban community, to determine what is to be planned for—a great and growing metropolis, a live but mature town or city, or one that is losing population and perhaps stagnating.

Six Essentials of the City of the Future

From much discussion with planners and from much reading of books and articles, I have tried to set down certain principles which seem to be fundamental. Here they are:

1. The towns and cities must be planned and built, or replanned and rebuilt, for the health and happiness as well as the economic well-being of those who live and work in them.

2. The physical layout and the administration of the city government—including the location of and the optimum balance among dwellings, business and industry, public services and facilities—must be such as to provide for the maximum possible ease in carrying on the basic activity of the people who are making a living.

3. In the interior of the urban community there must be elbow room—plenty of it—both for the purposes of present living and working and for the necessary space to adapt the physical layout to the changes required or desired in the future.

4. Internal transportation must be so organized as to permit fast and pleasant movement of things and people whenever such movement is required or desired; but the location of business and industry, as well as all other points of assembly or contact, must be so arranged with relation to the dwellings of the people that movement which is required but not desired shall be kept at the lowest possible minimum—not forgetting that, within reasonable limits and in wholesome surroundings, the pleasantest as well as the healthiest form of movement for people is walking.

5. There must be in, or within easy access of, every urban community not only all the public services needful for the physical and intellectual well-being of the inhabitants, but those required for their emotional well-being as well; as many of the cultural and spiritual facilities as the community can afford or the people can be induced to support—not only the utmost in educational opportunities for every citizen of every age, but art galleries, theatres, music, recreation centers, playgrounds, woods and streams for hunting and fishing, etc.

6. The towns and cities must, each in its fashion, be beautiful; but the beauty of each must be the expression of its own living, not a thing imposed from without.

To Eliminate Overcrowding

I should like to take up now the implications of the third of these essentials, the one having to do with elbow room. It involves a solution of the problem of land use and population density for all the sub-areas within the area to be planned. To get elbow room, you are of course at once up to the neck in master planning. From the economic and social point of view, one essential consideration must take precedence over everything else: *Overcrowding and congestion are to be eliminated and in future avoided.* This means in the first place that ample space must be provided, off the streets, for the parking of all the motor vehicles coming into town and stopping —for any period from 10 minutes to all day—and perhaps space for small airplane landing fields as well. It means in the second place that in all residential neighborhoods there shall be plenty of open space for light and air. It means finally that, except for such of the population without young children as prefer to live in multi-family structures, every dwelling unit must have a plot of ground of its own. If the urban communities are to be expected to maintain their population without dependence on immigration from rural areas, people must have places where they can raise their families in decency and health.

For such redevelopment a financial problem of peculiar difficulty must be solved. Essentially it is how to get rid of the *excess valuations* of land and buildings in the blighted and slum areas over those that would be justified for the new use of the land in accordance with a sound master plan. Such areas are for the most part admirably located for residential use. But they must be so used at a much lower population density than before if their future redeterioration into blight is to be avoided; and this will

be impossible until their excessive valuations are drastically lowered.

The Prickly Problem of Land Valuations

In a proposal outlined by Professor Alvin H. Hansen and myself, this prickly problem of land valuations is flatly asserted to be one with which only society as a whole can cope. We argue that the passage of laws radical enough to squeeze out quickly the whole of these excesses of valuation would be politically impossible, and of doubtful desirability even if possible. Society as a whole, we submit, is mainly responsible for the conditions existing, and society as a whole should pay the cost of cleaning them up so that a new fresh start can be made—even though in the process some individuals and institutions should get "bailed out" who do not deserve it.

This does not mean that reckless over-valuations should be allowed, either by the courts in condemnation proceedings or by the duly constituted agencies of the local governments in purchasing blighted and slum properties. On the contrary, every proper means should be employed, both in court actions and in bargaining with the owners, to acquire title to the land in question at prices as low as possible. In many if not most cases, the actual market (where there is any—not merely the prices asked) does take account of the true conditions and prospects in the area; and certainly the valuations allowed should not be higher than the actual market. It would be difficult to justify forcing them lower, however, through action by the community as a whole in reallocating the use of a large portion of its entire land area; for it could be convincingly argued that, in the public interest, this would be destroying values without just compensation.

When Government Buys the Land

If we assume that the land in the blighted and slum area is bought up by the local governments—with such financial aid from the Federal Government as may be necessary—there can be no doubt that one of the greatest single obstacles to the eventual realization of a sound master plan would be removed. Such land could then be put to its best possible use in the interest of the whole community, without regard to the acquisition cost of any particular parcel. Some of it would be required, no doubt, for the development of the transportation and terminal system. Some would be needed for parks and playgrounds. The bulk of it, though, would probably be available for housing—for everything from high-priced apartments to very low-rent dwellings. And for such uses it could be offered for lease on terms favorable enough to attract private developers or, if deemed desirable, to local public housing authorities. In any case the ground rents would be based not on acquisition costs but on the value estimated to be realizable from the new use.

Professor Hansen and I have proposed federal financial aid merely because we are convinced that, under existing conditions, most of the towns and cities would be unable to raise the money required. More specifically, we envisage a procedure somewhat as follows: For every town or city in the country—or for every group of contiguous municipalities—a long-range master plan would be completed in broad outline for the entire urbanized area. And of course it would provide for its own subsequent revision to meet needs which cannot now be foreseen. It would be formally submitted to the appropriate federal agency in connection with an application for financial aid in the acquisition of all the real property within a clearly defined slum or blighted area.

Decision as to acquisition, as well as to future kind of use, should be by the planning agency for the metropolitan area, not by the local housing authority, because the considerations involved would be far broader than housing alone.

No Centralized Control Over City Planning

Upon approval by the appropriate federal agency of all aspects of a proposal to acquire property, the government would be prepared to advance funds, if need be, up to the entire cost of acquisition. Possibly, repayment of the principal might be required, along with a share of the subsequent net proceeds from the property in lieu of interest. In view of the fiscal position of most municipalities, however, there are strong reasons for requiring them only to pay over, for 50 years or so, something like two-thirds of such sums as may be obtained from leasing the property, thus giving them a long breathing spell in which to undertake an overhauling of their tax structures. Of course, if they could accomplish tax reform at once, they might be able to finance the whole program out of their own resources and thus escape even the minimum of federal supervision that would otherwise be unavoidable. And let me add here that we envisage no centralized control over city planning. Every possible safeguard should be included in the underlying legislation (and in the accompanying discussion of the intent of the laws) against interference with the local community in planning any sort of town it wants, so long as a few indispensable and obvious standards are adhered to.

Demolition and rebuilding in the acquired areas, or rehabilitation where this is feasible, would proceed as rapidly as all the attendant circumstances permitted. Meanwhile, public work activities of all kinds would be fitted into the larger program. Steady progress would be made, over the years, toward realization of the growing and developing master plan.

The Immediate Planning Job

Let me add now a few words more about the planning job that ought to be started right away, in order to make sure that when a post-war depression threatens we shall not again be faced with the necessity of throwing together a made-work program of boondoggling or worse.

Worked out for the entire area to be planned would be a complete land-use pattern. This would include the location of industry, commerce, public service structures of all kinds, parks and playgrounds, and the various types of residential use. In particular it would determine the maximum permissible population density (number of persons working or of families living, per acre) in each district or neighborhood of the area to be planned. Then, on the basis of these determinations *plus* estimates of the movement of people and things within the urbanized area, would be planned the coordinated system of transportation and terminals—so developed in connection with the land-use pattern that traffic congestion and the nuisance of vehicles parked in the streets could not occur.

In the case of a typical city, probably the main categories of public construction called for by the master plan should be started in somewhat the following order:

Arterial Highway System. This of course can safely be undertaken only after the master planning is complete. The work will be likely to consist of several different kinds of operations, such as adaptation of existing roadways, new highways, and especially the roads in the suburbs connecting with inter-regional highways and giving easy access to the central portions of the city.

It will be clear that in such an extensive undertaking, large numbers of individual projects will be involved. Moreover, they can be so programmed that, when desirable, only a few or a great many in different areas, could be started simultaneously.

Terminals. If properly worked out, the master plan will indicate the best possible arrangement and location of all the different kinds of terminals in the city.

depending on the extent of the changes required in the urban pattern, there may be involved the relocation of railroad passenger and freight stations and the construction of new ones. The same will be true of autobus and street railway stations; of airports; and possibly of docks for shipping. Here again there may be a number of individual projects, although in general each single project is likely to be of considerable size. The programming may involve serious but not insoluble problems of temporary traffic; in some instances, no doubt, the relocation of railway lines will be required.

Slum Clearance. This should be undertaken, not only to rid the city of the slums, but also in order to make the land in question available for the use indicated by the master plan. Clearing away the structures may or may not require measures for the production of additional housing; but the principle should be firmly established that there is no direct connection between slum clearance and public housing, nor any necessity to use the cleared land for housing, unless so indicated by the master plan.

Slum clearance operations alone would not be likely to involve any great amount of public work. Demolition of structures and the work required to make the land ready for its new use would be about all. The new use itself, however, might involve extensive construction work, either private or public. Consequently, the rate at which clearance operations were carried on might be varied so as to speed up or slow down the amount of construction in the city as the situation with respect to available productive resources might require.

Blighted Areas. If the problem of such areas is to be attacked through having the city itself acquire and hold the land in them, for leasing to private or public enterprises, the amount of purely public construction need not be very large. At the same time the operation might be ultilized to stimulate a very large volume of private construction. Publicly provided, in any case, would be the new streets and public utilities required by the redevelopment plan, and possibly some demolition of structures. But the most important effect on employment would be likely to result from the construction required or permitted to take place in accordance with the plan. This of course could be greatly stimulated, as far as private enterprise is concerned, by making such land available for leaseholds at ground rents low enough to attract developers.

Public Housing. This is a sore subject. But probably, for political if for no better reasons, some public housing will have to be provided, either to overcome a general housing shortage or to furnish shelter to replace structures removed from slum or blighted areas. Clearly the construction might be programmed with considerable flexibility.

Parks, Green Belts, Recreation Centers, etc. Here again the amount of public construction is not likely to be large. Proper scheduling, however, in connection with land acquisition in slums and blighted areas, should be of considerable value in rounding out a city-wide program.

Cultural Buildings. Here again the programming may be a matter of utilizing land newly available from operations in connection with slums and blighted areas.

Parking Spaces. Space for the off-street parking of motor vehicles, and possibly for airplanes or helicopters as well, will be one of the most important aspects of the realization of the city's master plan. If redevelopment of interior areas is at a low enough density of population, no great amount of public or private construction need be involved. Again it might very well become a matter of the rounding out of city-wide programs.

Whether the federal aid for urban redevelopment envisaged in this article will actually materialize is anybody's guess. But it requires no guesswork to predict that, as the years go by, cities which ignore their slums and blighted areas will lose out in competition with their more farsighted neighbors.

So THE AMERICAN CITY's advice to its readers is to spend liberally during the war on city and regional plans for post-war public improvements. If federal aid becomes available, such plans will help your city to obtain its share of the national loans or grants. And, in any case, your municipality will be better prepared after the war ends for the wise spending of its own funds than would otherwise be possible.

Full Employment for the Construction Industry

Most of the traditional or standard types of public works will be included in the foregoing categories.

On the basis of planning and programming, such as I have tried to describe, it should not be difficult to select a list of specific projects in any particular community (or in any number of communities at the same time) sufficiently large to utilize all the otherwise unemployed resources of men and materials associated with the construction industry. Indeed it might very well be possible, through telescoping the suitable projects of a fairly long period, to make up a program for any particular community large enough to require a substantial expansion of the construction industry over its normal size; for it happens that this industry itself is possessed of extraordinary flexibility.

It is hardly an exaggeration to say that in the task of replanning and rebuilding the towns and cities alone, a very large proportion of all the manpower and materials and equipment not otherwise employed could be advantageously used for many years to come. And as we have seen, even in the case of the great projects requiring many years for completion, a high degree of flexibility is feasible.

Can We Afford It All?

Where is the money coming from? How can we ever finance such a program with the huge debt we shall have piled up by the time the war is over?

We shall have after the war the greatest productive organization in our history. Our equipment and skilled manpower will be all set and ready to go: for the period of shifting from wartime to peacetime occupations need not be long and difficult, if we use a little foresight now. And be it remembered that *as a nation we shall be debt free.* If this startles you, just remember that we shall not have borrowed abroad. On the contrary, we shall have lent enormous sums. Also, *as a nation,* we shall pay for our war effort as we go. This is so for the obvious reason that we can use up during the war only what we already have plus what we can produce. The complicated job we shall have later, with internal debt and taxation, can mean only that we are redistributing the cost of a job already paid for. The holder of a bond sold now will have, to be sure, a claim to a larger share of our future production than if he hadn't bought it; but the taxes to pay the interest on it will not reduce the total purchasing power in the country by a penny; for the interest payments will go right back into the system as income receipts of the bondholders.*

The fiscal task before us at the war's end, to be sure, will be a large one, no matter what we do about the cities; but we are rapidly learning how to handle such things, and to do so without damage to the essentials of our way of life. We are learning at last how to make our financial mechanisms, not the masters but the servants of our society—how to make them fit the facts of our power to produce what we want when we want it. And surely the restoration to civic health of our towns and cities, a job we can surely do over the years to come, is one of the things we know we shall want.

Can we afford to do this job? When we have the equipment and manpower available, we cannot afford not to do it!

EDITORIAL NOTE—Federal aid to facilitate urban redevelopment along the lines proposed in the foregoing article would be provided for in legislation introduced in Congress last month by Senator Thomas, as summarized on page 71 of this issue.

Local Government Is News—29

Talking Figures: New Ideas in Graphic Presentation

By PHILLIPS BRADLEY

THIS is an age of pictures. Our newspapers have led the way towards the news story compressed into headlines and the photograph instead of type, to tell the busy reader about the events of the day. More recently, the map and the graph have become the every-day tools of city-desk editors in interpreting the news to the public.

City Hall, too, has long used a variety of graphic devices to tell the story of financial records and operating functions, in a way both understandable and intriguing to the citizen. Some forms of graphic presentation—for instance, the dollar-pie chart, the linear graph, or the trend chart—have become standard patterns in annual and special reports. More recently, many municipal officials and others have been experimenting with new graphic devices which open up new fields for the imaginative interpretation of significant aspects of various public services. What are some of these devices—which can develop wider citizen-interest in City Hall's programs and activities?

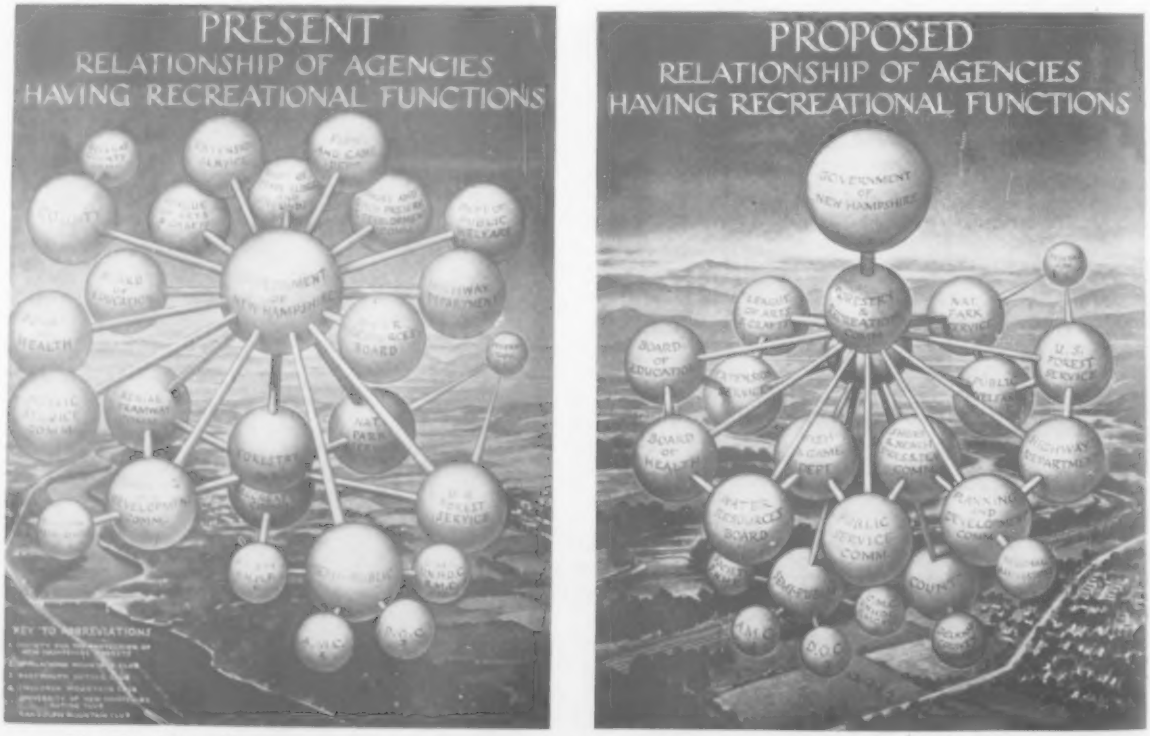
Organization and Reorganization Made Intelligible

Take the matter of organizational charts. Most have appeared as simple rectangular or circular divisions of the various agencies, with indications of their administrative position by horizontal or vertical spacing and connecting lines to portray functional relations. The two items noted here suggest several new possibilities in developing more effective presentation of organizational charts.

First, the purpose of the organization is suggested directly to the reader by the character of the background. Through a combination of picturizing and data, the meaning of the statistical or functional information is related immediately to the problem being analyzed—and to the reader's own knowledge of the subject. Thus, the chart becomes a kind of shorthand to the broader background of the citizen's civic concern and information. Second, as suggested by the New Hampshire recreational charts, the problem of functional relationships between different agencies concerned with a single activity is clarified. The typical organizational chart, which seeks to portray conflicting lines of responsibility, utilized many lines with enough criss-crosses to create a maze—on the chart and in the reader's mind. Here, the functional relationship is identified in relation a single activity, and the correct lines of responsibility compared with those existing under the present setup. Both types of illustration of community organization can be profitably developed to suit local problems of graphic presentation.

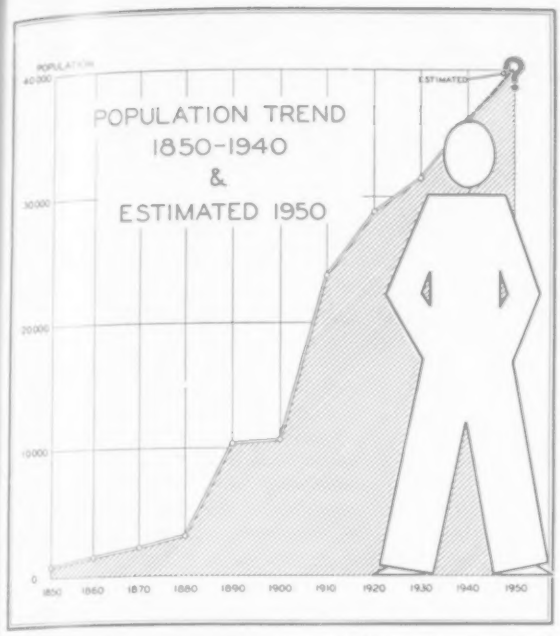
Trends—At a Glance

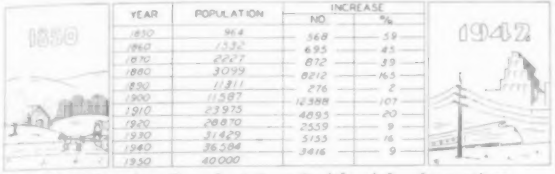
Another aspect of improved graphic reporting relates to trend charts. The standard pattern is the line diagram which presents changes over a period of years as a line moving across the period or as a series of vertical (or horizontal) bars to indicate secular variations. The Fort Smith population chart suggests a variation in the trend chart which seeks to provide the same sort of shorthand to the reader's own background as was noted above.



The New Hampshire State Planning and Development Commission visualizes its recommendations for increased efficiency in the state's public recreation program.

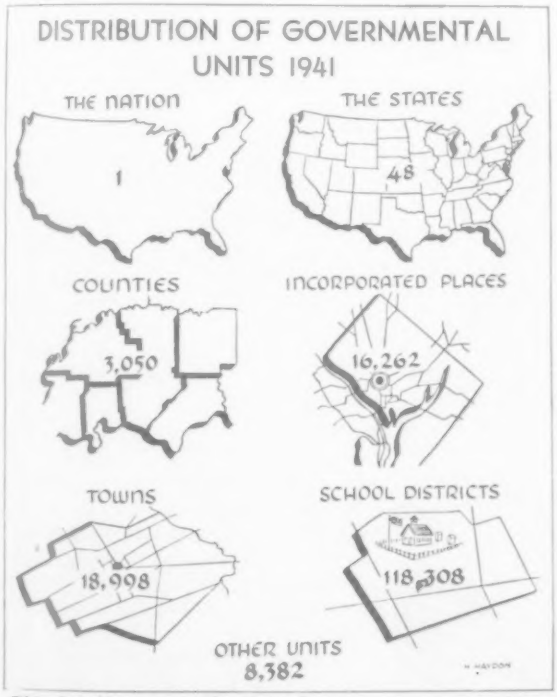
Next month, further illustrations of "New Ideas in Graphic Presentation" will appear on this page. You must have developed many techniques which would be of interest to other readers of this magazin. Send in copies of your recent reports, containing your ideas of sound interpretations of community affairs in graphic form, to The Editor, The American City, 470 Fourth Avenue, New York City. Mark your copies for "Local Government Is News."



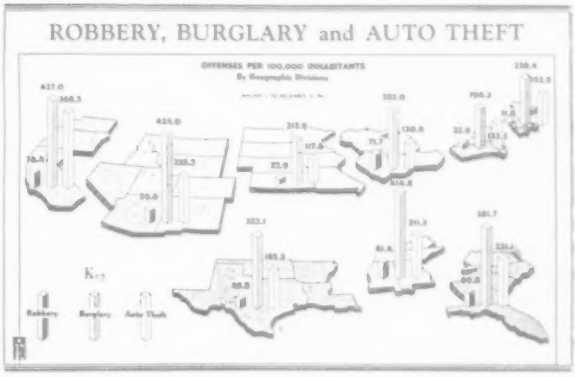


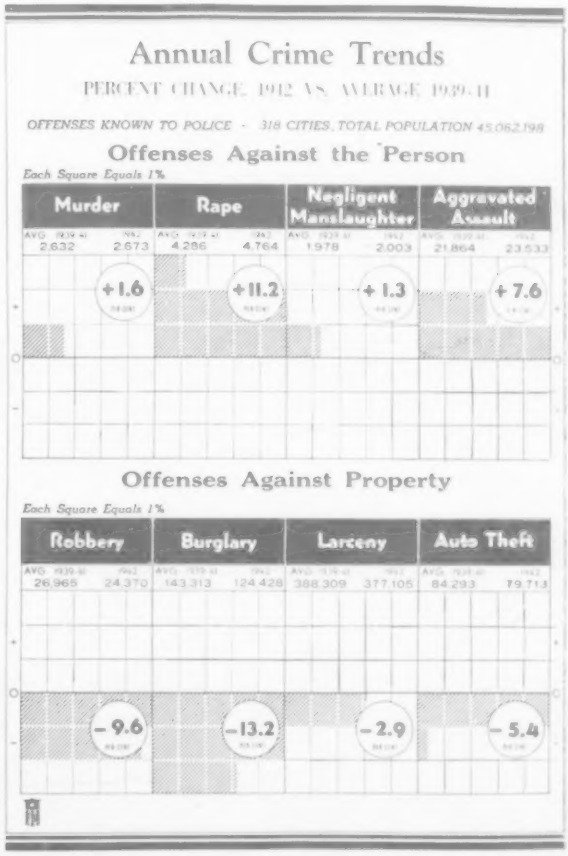
YEAR	POPULATION	INCREASE NO.	INCREASE %
1830	964	568	59
1840	1532	695	45
1850	2227	872	39
1860	3099	8212	165
1870	11311	276	2
1900	11587	12388	107
1910	23975	4695	20
1920	28670	2559	9
1930	31429	5135	16
1940	36564	3416	9
1950	40000		

The Planning Board of Fort Smith, Ark., dramatizes population trends



This chart, based on "The Units of Government," by William Anderson, is from the pamphlet of the University of Chicago Round Table on "The Challenge of Local Government."





Two charts from the 1942 "Uniform Crime Reports" of the Federal Bureau of Investigation

The two charts from the 1942 annual "Uniform Crime Reports" of the Federal Bureau of Investigation indicate two other techniques which aid the reader to obtain a quick and accurate interpretation of trends. The first indicates deviations from the normal and has the added advantage of providing the statistics at a glance, along with the changes in trends. The second combines graphic presentation of the data with an easily understood geographical distribution—easily understood because, again, it calls on the background information of the reader.

The War, the Supreme Court, and Lake Michigan's Water Level

A peacetime court decision restricting the diversion of Lake Michigan water into the Chicago Sanitary Canal blocks the vital production of power, the effective use of river transportation facilities and creates water supply and sewerage problems.

CHICAGO, America's second largest city, has acquired the dubious honor of harboring for the duration of the war, whether she likes it or not, an ugly sewage-treatment problem; an awkward and possibly dangerous water supply situation; partially developed power generating stations whose electricity is vitally needed; and inefficient river transportation. She has these not through any particular fault of her own nor lack of desire to remedy them. They present themselves, first because of the war, and secondly because of a United States Supreme Court decision.

Diversion Began in '90s

This centers around the interesting and long discussed diversion of Lake Michigan water into the Chicago River. It has been the subject of a bitter legal and engineering battle for many years. As far back as 1890, engineers were conjecturing about what would happen if this river were forced to flow contrary to its natural direction by diverting water from Lake Michigan. The obvious benefits would be to make the river navigable and also to treat Chicago's sewage by dilution.

Finally, after careful and comprehensive studies, the Chicago Sanitary District, in the early '90s, began this significant and enterprising construction. The actual diversion of Lake Michigan water into the river began in 1900 and increased gradually until it reached a rate of 10,000 cfs in 1925.

States Protest Diversion

It was not without its repercussions, however. States adjoining the mighty chain of Great Lakes, jealously guarding their important interests in it, one by one began legal action to stop what they considered an unwarranted diversion of this water. The lawsuit that resulted, while not as spectacular as some criminal trials, was of such magnitude and scope that it was difficult to comprehend fully. Both engineers and lawyers the country over followed it carefully because of both the engineering and legal opinions that it involved.

First the state of Wisconsin filed suit in 1922. Later the other lake states of Minnesota, Ohio, and Pennsylvania joined Wisconsin in 1925, and later Michigan and New York filed separate but somewhat similar suits. To demonstrate that the show was not one-sided, Missouri, Kentucky, Tennessee, Louisiana, Arkansas, and Mississippi came to the support of Chicago, intervening in 1926 as parties defendant.

Legal action crept along from court to court until it reached the nation's highest tribunal. And on April 21, 1930, this deliberative body rendered its significant decision that Chicago should reduce this diversion from 10,000 to only 1,500 cfs. The reduction, the Court decreed, should be progressive and be complete in 1938, allowing eight years to build sewage-treatment facilities.

Sewage Treatment

Although Chicago instituted a gigantic system of sewage treatment and carried it forward almost up to the outbreak of the war, she has not been able to complete the work sufficiently to avoid creating difficulties in the Chicago River. Nearly 95 per cent of the facilities have been completed and almost 100 per cent of the sewage now receives some degree of treatment. However, only 66 per cent of the suspended solids are removed leaving the remainder to pass into the waterway and cause a nuisance as well as a shoaling of the channel. H. P. Ramey, Assistant Chief Engineer for the Sanitary District, reports that the principal bottleneck is lack of adequate sludge drying facilities which cannot be constructed because of the materials situation.

The difficulty of anticipating what would happen in this waterway may be seen in the cautious reports issued by various engineers when the Illinois waterway was made a Federal Navigation Project. It was agreed that the diversion of 1,500 cfs plus the city sewage flows should be enough for transportation work, but might not be sufficient to avoid odor difficulties in the various pools along this waterway.

This nuisance did occur and in 1939 reached such proportions in the vicinity of Joliet, Ill., that this city petitioned the War Department for relief. The embarrassing position of this department may be seen by the fact that Congress had ordered the

The main sanitary and ship canal presents an attractive view. However, the flow of partially treated sewage into it creates public health problems and odor nuisances and tends to shoal the channel as well.

nstruction of the waterway, and yet e Supreme Court did not recognize act as authorizing additional di- sion of water to overcome the sani- y problems that it presented. Peti- ns directly to the court for relief re without avail, since the court ld that the offensive odors, although nuisance, were not a menace to pub- c health.

Actual Effect of Lake Diversion

The actual effect on the level of Lake Michigan is still the subject of strong debate among engineers. Despite the dignity of the Supreme Court, mighty Lake Michigan did not seem to show the respect due this deliberative body. In 1929 when the case was most critical, the lake inconsiderately rose to within a foot of the highest mark in its history, and caused serious damage to Chicago and adjacent areas.

One of the interesting complications connected with this reduction was in the Chicago River itself. Artificially forced into reversing its flow, it would have changed back again if the opportunity had presented itself. Sanitary district engineers recognized this, and voiced the warning that since the figure of 1,500 cfs was an average annual figure, actual diversion would at times be no more than 800 cfs. Should a sudden storm occur, there would be grave danger of a serious reversal of flow with the possibility of polluting Lake Michigan water in the vicinity water intakes. This required an additional expenditure amounting to some $3,000,000 in order to furnish gates that would protect against this contingency.

Problems

Specifically, the lack of the water is alleged to create these four problems: it is causing the pollution at the southern end of the lake which is controlled only by the use of heavy doses of chlorine; it has curtailed the generation of power at the Sanitary District's Lockport generators to about 45 per cent of their potential possibilities; it has lessened the efficiency of river transportation; and it has created a dangerous situation in regard to the pollution of the river itself.

By increasing the flow only 2,000 cfs, engineers estimate that the full power potentialities of the two modern generators in the plant can be realized and put to vital war work. And by increasing the flow another 5,000 cfs, bringing it back to well below the figure that it was before the court order, the pollution will be eliminated, shoaling in the waterway channel will be stopped, and river transportation will be greatly aided.

This request, extremely reasonable in light of the critical condition America finds itself in because of the war, was made of the Supreme Court during 1940, but without success. A subsequent appeal to the President failed also, with the reason given that the matter was legally in the hands of the court. Chicago officials argue that the President could, under his war powers, provide the necessary relief until such time as equipment could be furnished to solve the problem properly under post-war conditions.

Diversion Would Be Beneficial

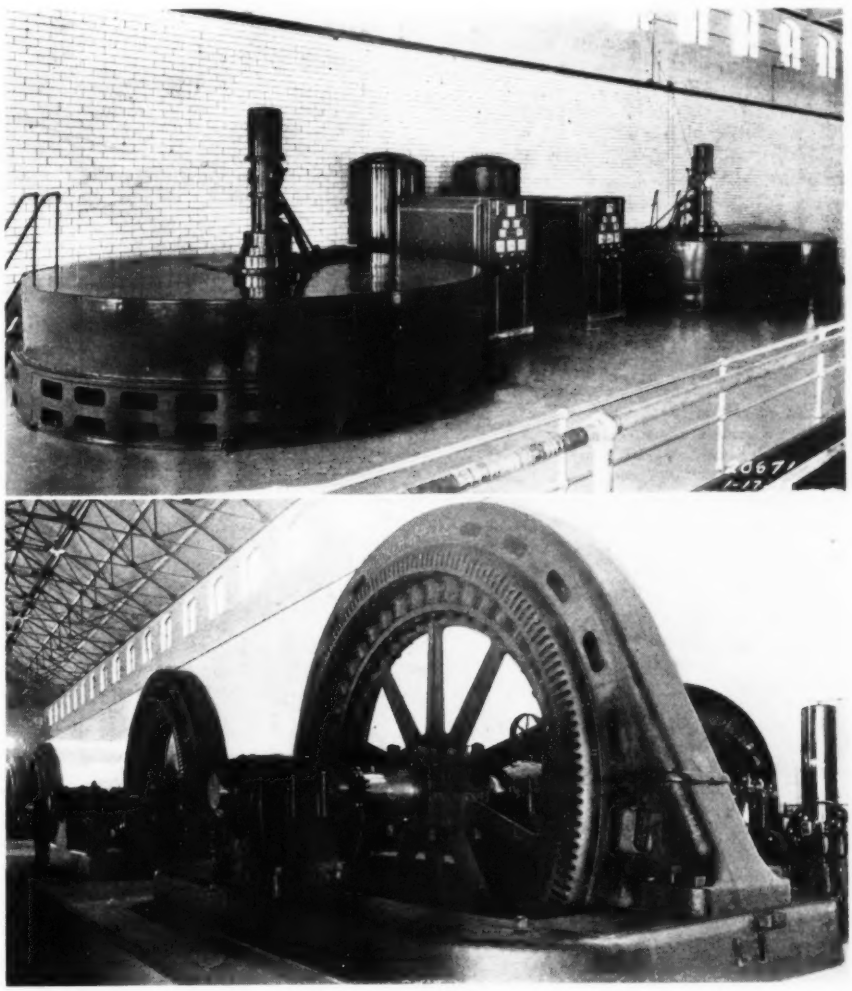
This diversion if continued, Mr. Ramey estimates, would ultimately lower the lake level about two inches. Less than half of this would be felt the first year, and substantially all would be accomplished in five years. This, instead of being detrimental, would be an actual benefit to the same states that were blocking the action previously. Excessively high water levels have caused property owners along the lake shore to appeal for some sort of relief before added damage was done.

The increased draft of water would improve the protection of the public water supply. This is particularly true in the Calumet region where the lake is now subject to considerable pollution.

It furthermore would mean the efficient use of the Lockport Power Plant. This machinery, installed but idle most of the time, could furnish enough power to save approximately 36,000 tons of coal per year.

And finally it would facilitate the through use of river navigation. The importance of transportation during wartime scarcely needs emphasizing.

And so it is that America's second largest city finds itself, during a crisis in history, hampered from doing its best work—in this case not by Axis activities, but by the inflexibility of the law.



These generators at the Lockport power plant have been crippled as thoroughly as though enemy saboteurs had been at work. The two upper units are each capable of 7,500 kva. Present diversion allows only one to operate continuously and the other 25 per cent of the time. These are Smith turbines and furnish power to Allis-Chalmers generators.
The older Crocker-Wheeler units shown in the lower view are each capable of 4,000 kva, and can be operated only during an occasional storm flow.

Quotable Thoughts for your Talks and Reports

Installment No. 6 of a Department of Ideas, Old and New, for Public Speakers and Report Writers.

A Code of Ethics for Public Employees

In the city clerk's office in Los Angeles hangs a sheet bearing the above caption, which reads substantially thus:

I am a Public Employee, mindful of the fact that I am but an integral part of the entire Government Structure, and that my employment is not a personal right, but a privilege embodying a trust.

I will be loyal, for fidelity is the foundation upon which the structure of Public Service rests.

Honorable, for stability of the Public Service structure depends upon honor and integrity.

Efficient, for efficiency creates public confidence and assures progress in Public Service.

Diligent, for the privilege of public trust demands my utmost endeavor in Public Service.

Courteous, for courtesy greatly enhances both the value and efficiency of Public Service.

Resourceful, ever seeking to extend my sphere of usefulness for the benefit of Public Service.

Tolerant, of the opinions and conduct of others both within and without the Public Service.

Watchful, in public and private conduct to ever uphold the highest ideals of Public Service.

—From Buffalo Municipal Research Bureau, "Just a Moment"

"

New occasions teach new duties;
Time makes ancient good uncouth;
They must upward still, and onward,
Who would keep abreast of Truth.
—James Russell Lowell

"

The Athenian Oath

We will never bring disgrace to this, our city, by any act of dishonesty or cowardice. We will fight for the ideals and the sacred things of the city, both alone and with the multitude.

We will revere and obey the city's laws and we will do our best to inspire a like reverence and respect in those who are prone to annul them or set them at naught. We will strive increasingly to quicken the public's sense of civic duty. Thus in all these ways we will transmit this city, not less, but greater, better and more beautiful than it was given to us.

(This oath was taken by Athenian youths upon reaching maturity.)

"

It's no good thinking you can choose a government, hand everything over to it and then wash your hands of the whole business. In any real democracy there must be bodies of people to study its workings, criticize and, at times, even applaud.
—Margery Fry, J. P., London

The "Four Freedoms" in Brief

Thoughtful Americans are deeply sincere about defending and advancing the "four freedoms" which are the essence of democracy in every truly democratic society. Freedom to worship God according to the dictates of our own conscience; freedom to speak for the right as we understand it; freedom to live in eventual peace, unperturbed by fear of marauding disturbers of human harmony; freedom to command the resources necessary to banish want and to mature our personal talents in socially useful skill—these are the bill of particulars for a commonwealth where respect for human dignity prevails.

—Harold D. Lasswell (in *Democracy Through Public Opinion*)

"

Our doubts are traitors,
And make us lose the good we oft might win
By fearing to attempt.
—William Shakespeare

"

The Magpie and the Trumpets

Plutarch tells us of a magpie, belonging to a barber at Rome, which could imitate to a nicety almost every word it heard. Some trumpets happened one day to be sounded before the shop, and for a day or two afterwards the magpie was quite mute, and seemed pensive and melancholy. All who knew it were greatly surprised at its silence; and it was supposed that the sound of the trumpets had so stunned it as to deprive it at once of both voice and hearing. It soon appeared, however, that this was far from being the case; for, says Plutarch, the bird had been all the time occupied in profound meditation, studying how to imitate the sound of the trumpets; and when at last master of it, the magpie, to the astonishment of all its friends, suddenly broke its long silence by a perfect imitation of the flourish of trumpets it had heard, observing with the greatest exactness all the repetitions, stops, and changes. The acquisition of this lesson had, however, exhausted the whole of the magpie's stock of intellect, for it made it forget everything it had learned before.

—From Percy Anecdotes

"

Today's public opinion is tomorrow's history—University of Denver.

"

Remember This

Nothing can bind us more closely in spirit to the men *who are doing our dying for us* in battlefields all over the world, than the knowledge that we are fighting for their cause in the land they left behind.

—New Jersey *Spokesman*

Tell Him Now

If with pleasure you are viewing any work a man is doing,
If you like him or you love him, tell him now.
Do not wait till life is over and he's underneath the clover,
For he cannot read his tombstone when he's dead!

—Berton Braley

"

The secret of freedom is courage—Aristotle.

In Lighter Vein

Woodrow Wilson's Favorite Limerick

As a beauty I'm not a great star.
Others are handsomer far;
But my face—I don't mind it
Because I'm behind it;
It's the folks out in front that I jar.

Anthony Euwer

"

Twinkle? or Scintillate?

Twinkle, twinkle, little star,
How I wonder what you are,
Up above the world so high,
Like a diamond in the sky.*

Jane Taylor with Ann Taylor

* Scintillate, scintillate, globule vivific,
Fain would I fathom thy nature specific,
Loftily poised in ether capacious,
Strongly resembling a gem carbonaceous.
(Anonymous Boston version.)

"

Speaking for Posterity

General Alexander Smyth, a tedious speaker in Congress, observed: "You, sir, speak for the present generation; but I speak for posterity."

"Yes," said Henry Clay, "and you seem resolved to speak until the arrival of your audience."

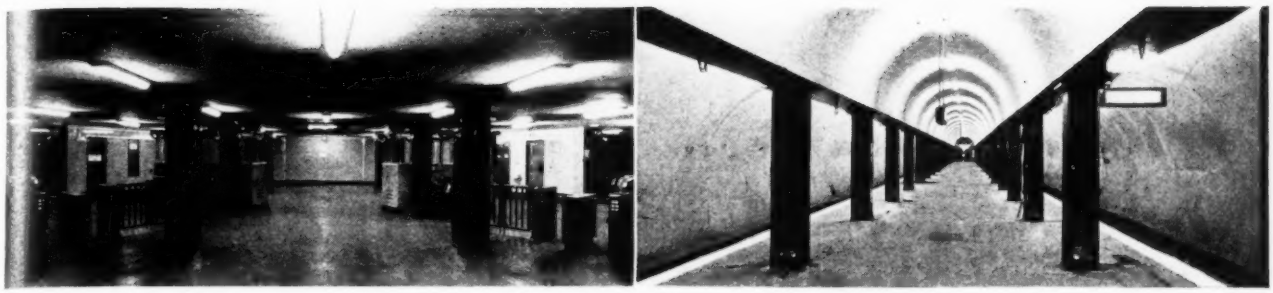
"

Bonds and Rations

During World War I the story was told of a farmer who, when urged to subscribe to the second issue of Liberty Bonds, demurred for the reason, as he explained, that he had not yet been able to save up enough money to begin paying interest to the government on his purchase of the previous bond issue!

This tale has a present-day counterpart in this AP dispatch from Marion, N. C.:

"I am trying to do my bit, patriotic-like," said the farmer, who had sworn that he and his family would abide by the sugar-rationing regulations, "but I'm married, have eight children, and I'm derned if I can keep on a-buyin' all that sugar."



At left is a typical downtown mezzanine station of the Clybourn—Division—State Subway in Chicago, Ill. Sidewalls are gray structural glass; floor is red concrete; columns are encased in black marble. At right is a downtown train platform which is continuous for 3,500 feet. Lighting throughout is fluorescent.

Chicago's Subway

First 9 miles built with 46 miles to go; fourth American city to have major subway system and total reorganization of local traffic; fluorescent lighting a feature

By CHARLES E. DELEUW
Chief Engineer, Department of Subways and Superhighways

AFTER 40 years of planning, the first route of Chicago's 55-mile subway system is ready for service.

This new service, providing much needed downtown terminal facilities, comes when Chicago is leading the nation in the production of war materials, and when its transportation lines, due to the high rate of employment, are heavily taxed. It will increase the carrying capacity of the elevated lines by 20 per cent. An eight-car inspection train made a number of trips over the route early in April. Guests included Mayor Edward J. Kelly, other officials, civic and labor leaders.

Route No. 1 is the Clybourn-Division-State subway. It is approximately 5 miles long and extends north in State Street from a connection with the South Side elevated near 16th, west in Division Street, and northwest in Clybourn Avenue to a connection with the North Side elevated lines about 2½ miles north of the center of the downtown business district.

Architectural treatment and equipment of Route No. 2 follows the pattern established for Route No. 1. Route No. 2, four miles long, will connect with the Northwest Side elevated lines near Evergreen and Milwaukee Avenues. It is to extend southeast in Milwaukee Avenue, east in Lake Street, south in Dearborn Street, and west in Congress Street to a turn-back loop near the Chicago River. The tubes have been completed from the incline connection with the "L" to Dearborn and Van Buren Streets. Eventually the elevated loop in the central business district will be removed.

Fluorescent Lighting

Route No. 1 of the Initial System of Subways is generally regarded by engineers as the most modern subway in the United States. Ventilation is unexcelled. Noise in operation has been reduced to a minimum by resting the running rails on resilient pad insets in the tie plates. Mezzanine and train platform areas throughout are illuminated by fluorescent tubes that produce a "daylight" effect at low cost. Route No. 1 has already won the reputation of being the best lighted subway in the nation.

Station sidewalls are covered with structural glass panels of bluish grey, the floors are red concrete, structural columns are encased in black marble, the ceilings are painted a harmonizing color, and the cashiers' booths are supported on bases of grey marble. This type of architectural treatment is not only attractive and durable but possesses the advantage of low-cost maintenance.

There are 14 principal stations on the route and a total of 23 escalators. Train platforms generally are of the center type, and in the central business district the platform is continuous for 3,500 feet from the north to the south of the loop. For the convenience of patrons, train stops are identified by a rotating color scheme in the decorations: blue, green, red, and brown are rotated in the order named.

Safety features include the latest type of signal equipment, alarms and communications systems, an emergency lighting system, automatic power control devices, emergency exits, and an emergency walkway at train door level between emergency exits and stations.

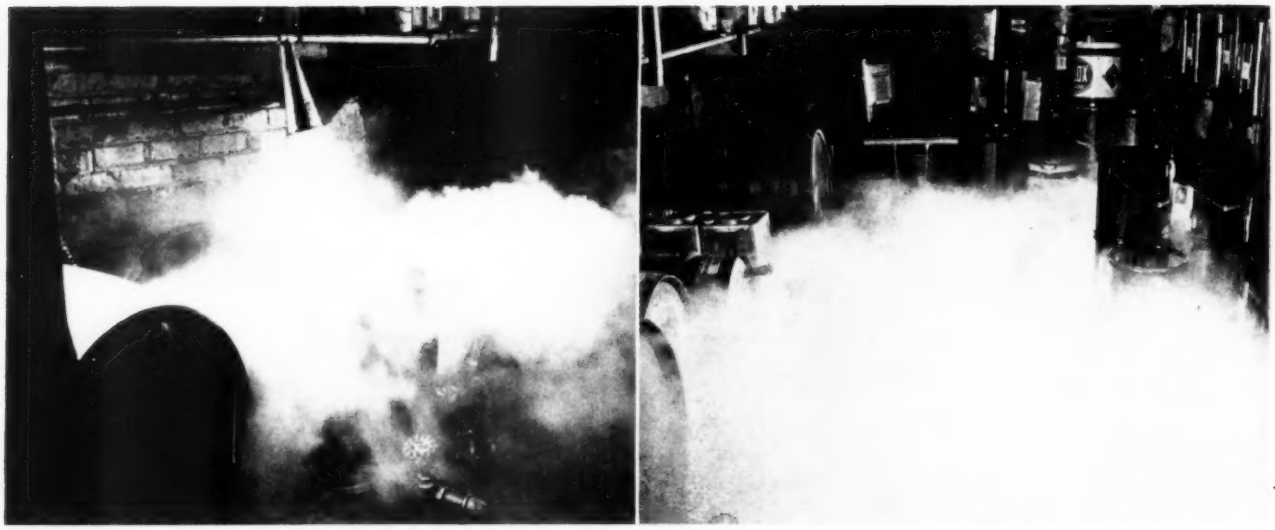
Steps Towards Transit Unification

Construction began December 17, 1938, in accordance with a plan proposed by Mayor Edward J. Kelly and approved by the City Council. The project is financed from the city's traction fund, which has been built up over a period of years by traction-company payments to the city for the use of its streets, and by a PWA grant of $23,130,000. The work has been supervised by Philip Harrington, Commissioner of the Department of Subways and Superhighways.

The Chicago Rapid Transit Company, the elevated operator, will operate the subway until it and the Chicago Surface Lines are merged. Unification requires only the approval of the Illinois Commerce Commission and formal acceptance by the proposed new company to become effective. In addition to the merger, unification provides for expenditures of $102,000,000 for modernization, new equipment, new routes, and extensions.

Unification and subway construction are only two units of the Administration's comprehensive transportation improvement program. The third is the construction of a 62-mile, city-wide system of limited-access highways.

Superhighway construction will also get underway in the post-war period. Right-of-way has already been acquired for part of the first section of the West Superhighway Route. This section extends from State Street to Wells Street, while the Route itself extends from Grant Park to the west City Limits. The comprehensive plan provides for six other superhighways.



PHOTOGRAPHS BY COURTESY OF WALTER KIDDE & COMPANY

Snuffing Fires With CO_2

Gist of NBFU and NFPA Standards

CARBON-DIOXIDE gas provides suitable protection against the hazards of flammable liquids, the rooms containing them, electrical machinery and apparatus, stocks, vaults containing records, and library stacks. The protection, moreover, is devoid of the added hazard of damage by water.

The total flooding of rooms and entire buildings is approved where such carbon-dioxide gas protection is considered desirable, if such protection is approved for the specific location by the inspection department having jurisdiction.

The extinguishment of fires in these hazards by smothering the fires through the use of carbon-dioxide gas can be successfully accomplished. This principle of extinguishing fires can be utilized to advantage not only through the use of first-aid hand apparatus, but also through other manual, automatic and semi-automatic means whereby the extinguishing gas may be applied to such hazardous occupancies. There are also certain conditions where expected fires may be prevented by prior flooding with the gas to dilute the oxygen content of the air.

Reducing the oxygen content of air (normally 21 per cent) to 15 per cent by the addition of carbon dioxide will extinguish ordinary flammable liquid fires. Further reductions varying down to 6 per cent are necessary to completely extinguish fires in some other materials.

High-Pressure Systems—Carbon dioxide is applied from cylinders in which it is stored at a pressure of about 850 pounds per square inch at 70 F. It is required that the quantity of carbon dioxide in the cylinders be determined either by weighing or by other means at least once a year.

Low-Pressure Systems—Carbon-dioxide gas may be stored in tanks in the liquid form in any capacity. Low-pressure tanks are kept refrigerated so that the gas pressure may not exceed the designed working pressure of the vessel (usually around 325 pounds per square inch).

Carbon-dioxide gas is heavier than air and so has the quality of resting upon the surface of flammable liquids and of permeating through loose goods and into semi-confined spaces where other extinguishing materials might not reach. While heavier than air, the tendency of the gas to settle in the lower part of rooms and enclosures can be taken care of by using a sufficient quantity of the gas to flood the entire room. It is useful for quick, flashy fires not involving glowing coals or other incandescent materials. For the latter type of fire, unless the enclosed space is relatively tight, it may be necessary to apply the gas more or less continuously in a progressive manner during the period necessary to extinguish the glowing fire.

Effect on People

As far as safety to life is concerned, the gas, if not breathed in excessive amounts, is not dangerous, but in quantities it is suffocating. However, it is well to note that ordinarily, people will not be immediately overcome by breathing an atmosphere containing the required percentage of carbon-dioxide gas but will have sufficient time to withdraw. The gas is a non-conductor of electricity and can be safely and effectively applied to fires in live electric apparatus.

When a relatively large quantity of gas is discharged, it is likely to interfere with visibility temporarily. This may result in accidents where there are obstructions or other features tending to interfere with a safe exit. Aisles should be kept clear and, in some cases, guard rails should be provided to protect employees from stumbling or falling upon machinery or other apparatus. Signs calling for a prompt exit are advised. An automatic fire alarm, set to operate before the carbon-dioxide apparatus functions, is also a good safeguard.

The carbon dioxide as stored in containers in liquid form, does not freeze at the lowest climatic temperature, and so the protection is available in cold areas as well as warm ones. Pressure in the containers rapidly increases as the temperature is raised. The discharge from cold containers is slower than from containers kept in a warm place, which fact should be considered when equipments are installed, except in the case of low-pressure systems.

Three methods of extinguishing fires

(*Concluded on page 75*)

Soft Water in South Dakota

Relief for Vermillion's Water Treating Plant Just Beats a Priority Deadline

By Ernest R. Myron
Water Works Superintendent

MODERNIZATION of Vermillion's water softening plant, completed last year, represents the maintenance of the city's water softening policy established back in 1929. Soft water for cities in this area is unusual unless strong measures are taken. People here are well aware of the fact that softening is more than a mere convenience, but actually is a real civic asset.

Since 1929, when the plant was constructed, we have added 12 miles of mains to our distribution system, and have seen the demand grow to unanticipated heights. We even experienced a shortage of water occasionally, because of an overloaded treatment plant. As we could expect this condition to become aggravated as time went on, the city decided to find a remedy.

Plans for Improvement

In 1941 the city retained a consulting engineer to draw plans and specifications for new filters and equipment to increase the treating capacity of our plant to 1,000,000 gallons per day. In order to accomplish this, it was decided to install one Infilco Accelerator, three chemical feed machines, meters and filter equipment. A lime slaker was included, since it was shown that a good savings could be obtained by slaking the lime instead of using it in the hydrated form. Thorough studies were made before reaching this decision, including extended inspection trips to observe first-hand operating results.

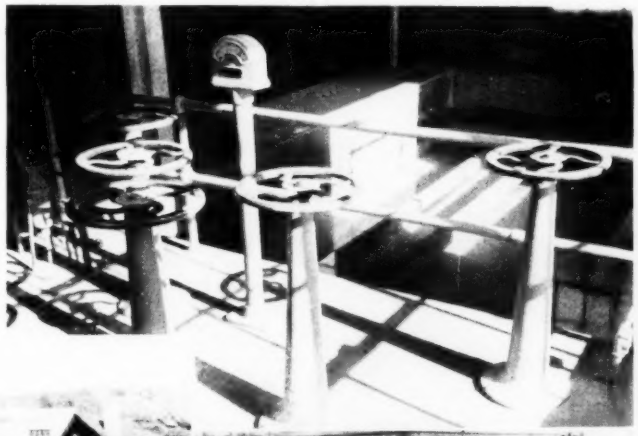
Added Facilities

The plant was completed and placed in operation in February, 1942—fortunately soon enough so that its construction did not interfere with the heavy demands of war. It has taken some time to adjust the machinery, make minor alterations, and otherwise coordinate operations. However, the plant now works excellently on flows from 200 to 800 gallons per minute. This is more than ample to meet our daily consumption.

Water is delivered from our two wells by two Pomona pumps, each large enough to supply our entire consumption alone. It then goes through Republic flow meters to the aerators, flows by gravity through the softening plant and filters to a pair of clear-water storage tanks with combined capacity of 300,000 gallons, and is pumped by two 500 gpm Fairbanks-Morse pumps to the overhead tanks. The accelerator unit was placed in a basin 20 feet square and 16 feet deep. The water depth, maintained at just over 14 feet, provides 53 minutes retention at a rate of 800 gpm. It is equipped with automatic sludge removal by ATC timer control through an internal concentrator which thickens the slurry, thus minimizing the waste of water. Sludge discharge from the concentrator will average one per cent of the volume of water entering the accelerator.

Water Treatment

In treating the water we first prechlorinate, then use lime, soda-ash and sodium aluminate for softening and coagulation. We also use a stabilizer following filtration in order to prevent after-precipitation from our excess lime treatment. The stabilizer used in National Aluminate No. 18 briquet and consists of sodium poly-phosphates. Dosage is applied at the rate



Above: The filter room in the Vermillion plant.
Lower left: How the Vermillion Plant looks from the outside.
Lower right: A view of the accelator room showing also the three chemical feeders.

Stand Pipes

Stand the Test of TIME AND SERVICE

★

All over the country you'll find Graver-built Stand Pipes serving communities both large and small. Some will show the marks of recent construction, while others — many of them — have been in constant use for more than a quarter of a century and are still good for years to come.

Graver builds stand pipes of any capacity, either welded or riveted, to meet the most rigid municipal or industrial requirements. If today's increasing demands are putting a strain on your present equipment, consult Graver. We will gladly discuss your problems with you and submit quotations without obligation.

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of 2 ppm. We use an average of 34 grains per gallon of lime, 4 grains of soda ash, less than one grain of sodium of aluminate. As it leaves the filters it has an average of ¾ grains of excess lime, with a pH of 10.2, which is a bit too high. We have basins for recarbonation, but owing to war conditions, recarbonating equipment has been omitted. We believe that when we are able to recarbonate, we will materially increase our efficiency and give the consumer a softer and more stable water.

Under actual operating conditions, a trial run has been completed with this plant at the rate of 1,238,000 gallons per day, with highly satisfactory results. This gives us a nice reserve capacity.

Profits

The plant has earned a substantial profit each year. There has been no need to increase the rates established prior to water softening, and all improvements have been financed out of operating income. It is more than a tribute to good engineering, and is the result of the fine cooperation and foresight of our City Council and Mayor. We have a modern gas heated brick building, 32 feet by 90, housing our filters, aerators, chemical feeders, pipe galleries, chemical storage room, office room and heating plant; with a 100,000 gallon wash water basin and Accelerator basin under the structure.

The building contract was held by Coomer Construction Co., Sioux City, Iowa; Infilco Inc., Chicago, supplied the equipment; and H. S. Nixon, Omaha, was the consulting engineer. The department is managed by the water committee of the City Council. This is composed of Walter Meisenholder, Philip Odeen, and Marcus Anderson. R. D. Thompson is Mayor.

Chemical Water Analysis

	Untreated Water Parts per Million		Treated Water Parts per Million
Calcium Carbonate	392		24
Calcium Sulfate	0.0		8.0
Calcium Chloride	0.0		0.0
		Calcium Hydroxide	18
Magnesium Carbonate	102		0.0
Magnesium Sulfate	108		0.0
Magnesium Chloride	0.0		0.0
		Magnesium Hydroxide	7.0
Sodium Carbonate	0.0		365
Sodium Sulfate	267		365
Sodium Chloride	20		16
Iron Oxide (unfiltered)	12.9		0.3
Iron Oxide (filtered through paper)	n.d.		n.d.
Silica	26		10
Total Dissolved Solids	928		448
Alkalinity (P) as $CaCO_3$	0.0		49
Alkalinity (M) " "	514		61
Total Hardness " "	604		67
Calcium Hardness " "	392		55
Magnesium Hardness " "	212		12
Non-Carbonate Solids " "	295		277
Total Solids " "	809		338
Mineral Acidity " "	0.0		0.0
Total Sodium Salts	287		381
pH	7.1		10.6

Controlling "Red Water" and Main Tuberculation

HOW the familiar "red water" and tuberculation problems were controlled at Falmouth, Mass., was explained by E. Sherman Chase of Metcalf and Eddy, engineers of Boston, Mass., in a paper delivered at the New England Water Works Association meeting.

Before the introduction of remedial measures, the water was frequently high in color and iron, generally unsatisfactory for laundry and other household uses. In addition the corrosive properties of the supply encouraged rapid tuberculation even to the extent of plugging house services.

Analyses showed that this "red water" and tuberculation difficulty was the result of exposure of the interior of the mains to a soft water with a high oxygen content. Mr. Chase, through a series of interesting tests, determined that a lime treatment that would maintain a pH of 9.0, would meet most of the "red water" troubles, but would not prevent tuberculation. Ordinary water main cleaning, he stated, temporarily eliminated the obstructions but did not serve as a cure.

Cleaning together with cement relining by the Tate process, he found, was more effective and many thousand feet of mains have been restored in this manner during recent years. It substantially restores the capacity of the mains and does not affect "red water" troubles. The relining action somewhat decreases the actual inside diameter of the pipe. The lining also temporarily increases the hardness of the water.

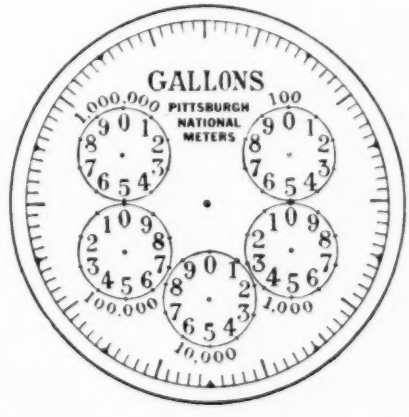
In view of the many miles of mains remaining that are unlined, the lime treatment has been continued. The result in regard to the control of "red water" has been good.

Let the Customer Read the Meter

MANY water departments are asking customers to read meters and are getting excellent results. One method is to leave a card at the premises when the meter reader cannot gain access during his regular call. Printed instructions ask the customer to indicate the position of the meter hands.

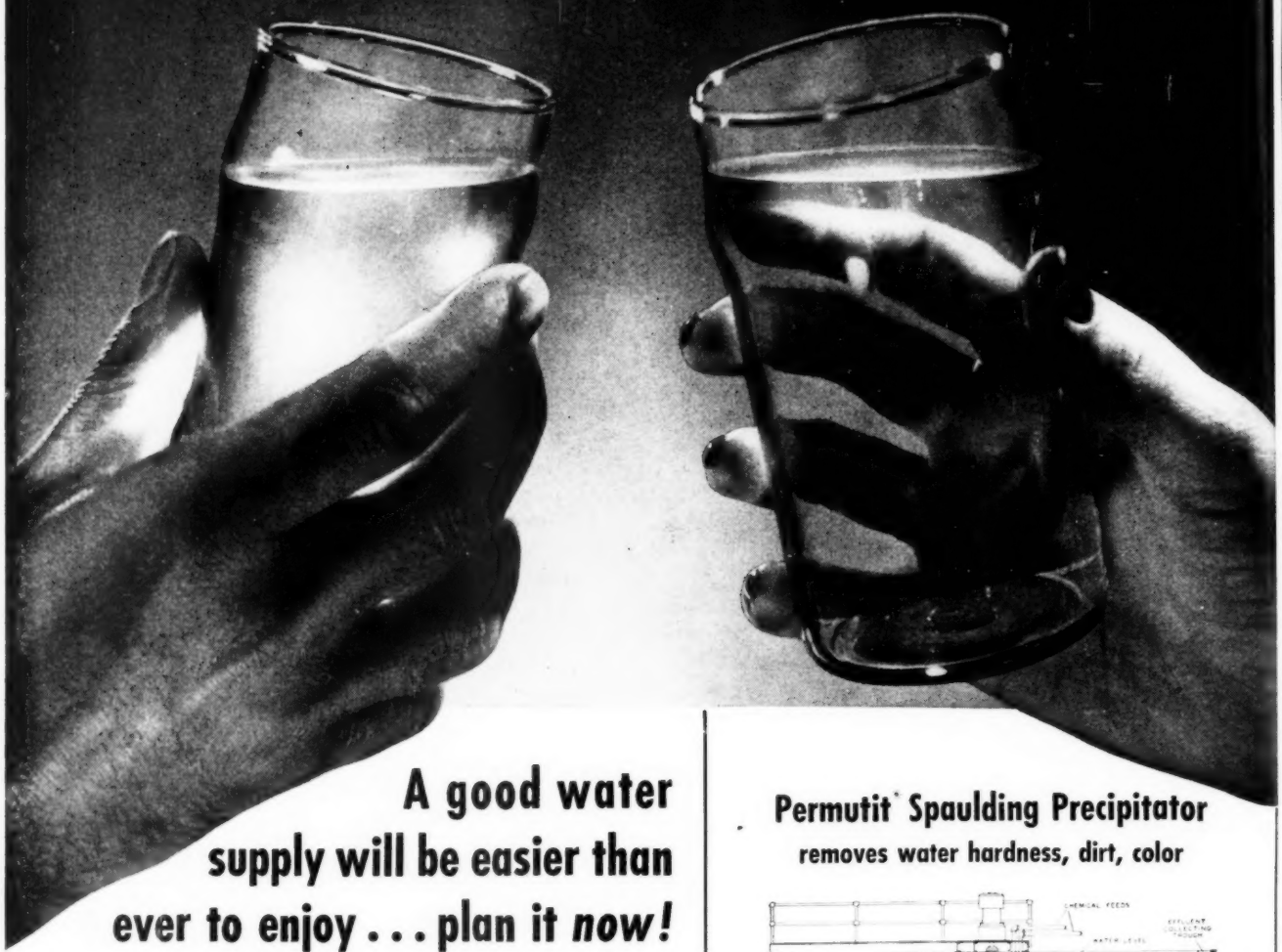
Some cities ask the customer to make the readings during a majority of the months with the meter reader making an occasional check throughout the year. Glen Ridge, N. J., uses this method, and R. K. Honaman, chairman of the water committee, reports enthusiastic success.

As a cooperative measure ,the Pittsburgh Equitable Meter Co., Pittsburgh, Pa., will furnish without charge printing plates for any type of meter that this company manufactures. The company requests that water department officials contact the Advertising Department at 400 N. Lexington Ave., Pittsburgh, and indicate the type of meter for which the facsimile is desired and specify whether the dial should be of the round-reading or straight-reading type recording in gallons or cubic feet.



How the meter dial will look on the card that the customer receives.

To a happier future for your city— with soft, sparkling water!



A good water supply will be easier than ever to enjoy . . . plan it *now!*

Good water—conditioned by Permutit—means happier, healthier homes, more prosperous business . . . as hundreds of modern municipalities have discovered. Now improved equipment makes it more practical than ever. After the war, few communities will be willing to put up with hard, turbid water. Be ready for this public improvement . . . plan it now! Write for booklet to The Permutit Company, Dept. G3, 330 West 42nd Street, New York, N. Y. In Canada: Permutit Company of Canada, Ltd. . . . Montreal . . . Toronto . . . Winnipeg . . . Calgary.

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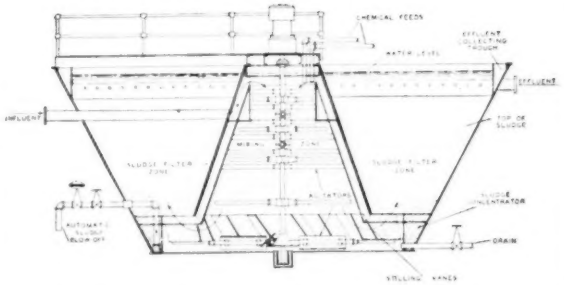
WATER CONDITIONING HEADQUARTERS

Permutit* Spaulding Precipitator

removes water hardness, dirt, color

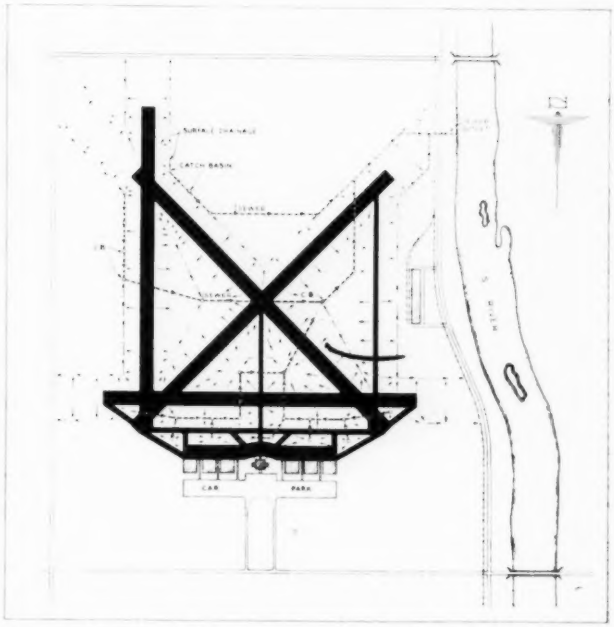


This new type of equipment is revolutionizing cold lime soda treatment. It occupies only half the space of old-style plants! It cuts detention periods as low as one-eighth of former time! It makes important savings in chemicals! Installations now in use handle capacities as high as 120,000,000 gallons daily! Find out how it can easily be adapted to your city's needs.

*Trademark Reg. U. S. Pat. Off.

Analyzing the Design of Airport Runways

Some Disagreements with Mr. Stephens' Observations Reported Last Month



How would you design the runways for this typical Class III airport?

SHARP differences of opinion are reflected in the comments received concerning C. K. Stephens' article covering the design of airport runways. This article appeared on page 81 of the April, 1943 issue of THE AMERICAN CITY.

Two authoritative and interesting statements on this are expressed below:

To the Editor of THE AMERICAN CITY:

We have read Mr. Stephens' article and we regret to say that we cannot concur that the design of airport runway pavement is as simple as Mr. Stephens would lead one to believe.

Our general policy in designing airport runway pavement is to design the runway from the foundation soils in the subgrade up to the finished surface course. The first step is to bring the bearing properties of the subgrade soil up to a minimum bearing value. When subgrade soils are deficient in this respect, correction can be accomplished by the addition of other soils or aggregates of higher bearing value. These soils are mixed with the deficient soils in a process called mechanical stabilization. When the subgrade soils are very low in bearing value, mechanical stabilization is not usually feasible; and under these circumstances, it is our general practice to cap the subgrade by depositing a layer of non-capillary subgrade material of high bearing properties.

Under certain conditions the construction of a flexible-base type of pavement on subgrade soils of low bearing value would require a base course so thick as to be uneconomical when compared to the construction of the rigid-slab concrete pavement. Under these circumstances it is economical to use the rigid-slab.

After many years of experience and observation, it has been found that bituminous wearing surfaces should be densely graded and preferably of the hot-mix asphaltic concrete type. The function of the asphaltic surface course is to provide a wearing surface which will serve as a bond on the base course and provide a roof over the base course to prevent deterioration from water, wind, frost, snow, etc. Open grader types of bituminous wearing surfaces, such as penetration surface treatment which Mr. Stephens recommends, are entirely unsuitable to perform the required function of the wearing surface because their porosity, which permits the infiltration of water and the rapid oxidation of the contained asphalt.

Another important factor, which is being taken into consideration in the design of pavements under our program, is the wheel loadings likely to occur under the aircraft operations expected at the particular airport. Our pavement designs are based generally on three classes of wheel loadings, ranging from the smaller airport, where lighter traffic with wheel loadings of not over 32,000 pounds per wheel are anticipated, to the major air terminal where wheel loadings of 120,000 pounds per wheel can logically be expected. In designing pavements to accommodate the heavier loadings, it is usually more economical to use a rigid-slab type of construction.

The subject of airport runway design has been given much thought and study by the engineers in our organization, as well as by those in other Federal agencies who have been charged with airport construction. Our present design policies have been evolved from the many years of experience and research conducted into this highly complex engineering problem. If we were to adopt the suggestions made by Mr. Stephens, we would reasonably expect that we would have to reconstruct at least 75 per cent of the runways constructed under such a policy within a very few years.

CHARLES B. DONALDSON,
Director of Airports, Department of Commerce, Civil Aeronautics Administration, Washington, D. C.

To the Editor of THE AMERICAN CITY:

In looking over the article "Analyzing the Design of Airport Runways" by Mr. C. K. Stephens, I find some items on which I do not agree. However, this is a case of one engineer's opinions against those of another engineer, and there is no law against the free expression of opinions.

Impact—There is no one item in connection with airplanes which has received more discussion than impact, and like most such questions there are two sides to the story. Many engineers, including the U. S. A. Corps, contend that more damage occurs on warm-up aprons and turnarounds than from landing on runways. The U. S. A. Engineers manual recommends that runways be designed for static load, and that aprons and turnarounds be designed for an impact factor of 1¼. These conclusions seem to be based on observations, as are also those of Mr. Stephens, and we cannot deny that they have merit.

On the other side of the picture, all landing tests that have been made show impacts from about 1.5 for the average landing to 3.5 for the most severe.

Drainage—I agree with Mr. Stephens on the use of previous bases, but they become reservoirs if no outlets are provided. In my opinion, the ponding of water on top of clay and gumbo soils under pavements causes about 75 per cent of our highway pavement failures. This opinion is based on my examination of pavement failures in many states, both in the north and south.

The drainage design illustrated in Mr. Stephens' article is simply a catchbasin design, where the water must flow long distances over shoulders and sod slopes, which may cause erosion and undue softening of the shoulders. Such a drainage system will remove the water once it reaches the inlets and will prevent actual flooding, but other than that the water has done all the damage possible before reaching the inlets. The drainage systems on the Army airport at Alexandria, La., was of such a design, but now they are installing "Runway Drains" to intercept the water at the edge of the runway to prevent shoulder erosion.

H. E. COTTON,
Drainage Engineer, Armco Drainage Products Assn., Middletown, Ohio.

The Forehearth

A forehearth in one of our foundries — drawn by Hugh Ferris

Molten iron is pouring from the forehearth into a ladle which will be picked up by a crane hook and carried to a Super-de Lavaud centrifugal casting machine. All raw materials in the melt have been inspected and laboratory-checked. The analysis, predetermined. Then, as a further precaution, to insure uniformity of both analysis and temperatures in cupola operation, the molten metal is accumulated and mixed in 12-ton reservoirs called *forehearths.* Variations in speed of melting, iron composition and temperature are thereby reduced to a minimum. This is one of a series of controls in operation at each of our plants, beginning with inspection and analysis of raw materials and ending with tests of the finished cast iron pipe.

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Orderly Insurance Program Saves $6,000 in Annual Premiums

By George H. Couenhoven
Secretary, New Rochelle Association of Insuring Agents
New Rochelle, N. Y.

Shortly after becoming city manager, in 1934, Irving C. Brower inquired if there were an association of insurance agents in New Rochell, N. Y. Now it happened that only a year before, certain competitive conditions had led to the formation of such an association with 33 members all belonging to the national, state, and county insurance associations. Consequently, the new city manager found that he could deal with an experienced body of practically all the agents in the city. He had heard that another city had constructed a sound municipal insurance plant and he wanted to achieve such a plan in New Rochelle.

The agents worked out a plan by which the association is the insurance clearing house for the city government. Any municipal change affecting insurance is reported to the association by the department concerned. Around August 1 each year, the departments ask for the amount of insurance to be included in their budgets, which are made up by October 1.

An appraisal was made by the city building inspector of the insurable values of all buildings. Only a few were underinsured. The majority were overinsured up to as much as 100 per cent. A careful check of all rates resulted in numerous reductions. Following this streamlining, all fire insurance was, of course, written under a five-year stagger plan which of itself made a further saving in the premiums. These master policies are rotated among agents who do not write any city casualty insurance. Casualty policies are written by general agencies, which do not participate in the handling of the city fire insurance. The city is also protected by public liability on the streets and on other municipal property.

For the city-owned automobiles, fleet policies are written. Where formerly the city received no credit as a fleet owner, all present automobile insurance is under fleet policies, bringing a reduction in premiums. Fire and theft, which were not carried, are now covered under a fleet policy.

Premiums are paid by the city to the New Rochelle Insuring Agents Association which remits to the writing agents, deducting full agency commissions for fire insurance; and for casualty premiums, deducting all but 5 per cent which takes care of the cost of the frequent claim service.

Results

After this modern program had been in operation three years, the city manager announced that the savings in premium alone amounted to $6,000 per year and that the city was much more closely covered by insurance. The city fathers, moreover, were pleased with a situation in which they were not exposed to the continual request: "Give us some insurance."

How do the insurance agents feel about this method of handling city government insurance? We are very much pleased with the way it has worked out, because we find that it has done more to keep agents writing stock-company insurance than anything we ever tried. It has produced a harmony among member agents that never before existed. After all, with the old setup in which a few political-minded agents hogged all the city insurance they could get, a change in the political picture could leave them without any. All this uncertainty has been done away with. We feel that the New Rochelle city insurance plan is just right, because it is fair to the city and to the local insurance agents.

Tax Record Cards in Rolling Cabinets

By D. Lee Staley
City Tax Collector
Hagerstown, Md.

FOR each taxpayer, Hagerstown, Md., now keeps a 20-year individual record of real estate and personal taxes on an 8- x 9-inch card which folds for insertion in an 8 x 5 Kardex pocket. The 10,000 envelopes or pockets are filed and protected in six floor-model tray cabinets on rubber-treaded wheels which permit easy rolling from and to our fireproof vault.

A description of the property is carried in the upper portion of the fold-over card. The lower section provides a running ten-year record of: year, value of real and personal property, amount of tax, interest (if the account is delinquent), discount (if the bill is paid on time), the amount paid, the date paid and, where required, releases.

The visible margin at the bottom of the card flashes the name and address. Through the use of ¼-inch colored signals, delinquent accounts are quickly spotted, and analysis and collection effort is concentrated only on those accounts which are past due.

To overcome the difficulty of typing on the extreme lower edge of a card, Kardex cards are provided with a perforated extension. This extension carries a "pica" rule which corresponds to the spacing on a typewriter. With the typewriter's paper guides set to match the card scale, it is a simple matter to have all the indexing in perfect alignment from left to right throughout the depth of the slide by using the typewriter's tabulating stops. When the cards are completely indexed the perforated extension strips are quickly removed.

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Eight years before Pearl Harbor, Reeves research and production began keeping pace with the fabric requirements of the U.S. Government. From initial orders of a few thousand yards of Army Twill, the production of many Reeves fabrics has been constantly increased to meet the needs of our rapidly expanding Army, Navy and Marine Corps. Since January 1940, mills under Reeves management have more than doubled their production — since January 1941, they have been in excess of 90 per cent of capacity on essential fabrics for our fighting forces.

New Fabrics from Reeves Laboratories

In addition to this increased production, Reeves laboratory experts are constantly cooperating with the Government in the development of new fabrics such as the six ounce Army Twill and Marine Corps suiting to help our fighting men master the elements and beat our enemies.

In spite of wartime pressure, Reeves supervision "from Cotton to Cutter" insists upon careful inspection and constant laboratory testing of all fabrics to insure their meeting rigid U.S. Government specifications. After Victory, the expert ability of Reeves war workers plus the careful overall supervision of Reeves management will weave the benefits of wartime experience into peacetime fabrics.

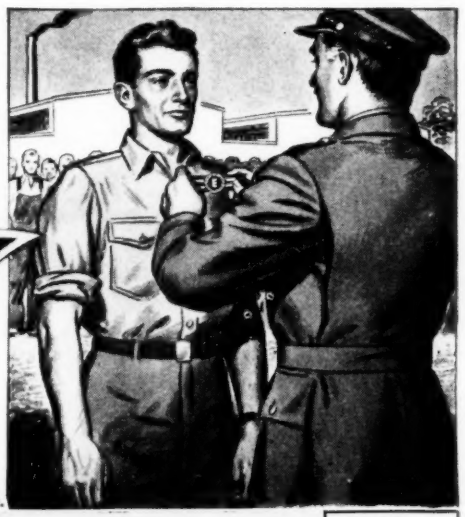
Now – three new "E's" in Reeves

For signal achievement in meeting our Government's wartime demands for cotton textiles, the 2500 men and women of Mills Mill No. 1, Mills Mill No. 2 and the Fairforest Finishing Company have been honored by three Army-Navy "E" awards. Not only will the three flags serve as a source of pride in past performance—they will be a constant incentive to even greater efforts along the road to Victory!

1 This Army-Navy "E" was awarded to Mills Mill No. 1, Greenville, S. C. converted in record time to the all-out production of vital fabrics for our fighting forces.

2 This Army-Navy "E" honors Mills Mill No. 2, Woodruff, S.C., one of the Government's chief sources of Type I Wind-Resistant Twill, known as Byrd Cloth.

3 The third Army-Navy "E" goes to the Fairforest Finishing Co., Clevedale, S. C. for its part in finishing vital war fabrics.



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How Small Cities Are Planning for Post-War Municipal Improvements

In* The American City *for November and December, 1942, brief statements as to post-war planning were published from 96 cities of over 30,000 population. Replies from cities in the 25,000 to 30,000 population (totaling 103) were published in the issues for January and February, 1943. In the April issue 38 replies were given from places in the 15,000 to 25,000 population group. Since that issue went to press 26 additional municipalities in this group, in addition to 3 in other groups, have furnished the data published on this and the following page.

Here is the wording of the five questions and a summary of the replies included in the April and May installments (the replies from the larger cities having been summarized in the December and February issues):

1. *"Has your city begun to plan for post-war public works or other municipal improvements to be undertaken when materials and manpower are available?"*

As against 67 affirmative replies listed below and last month, only 11 cities gave a negative answer to the first question.

2. *"If so, what are the principal types of projects contemplated in these plans?"*

The replies indicate that the "shelf" of post-war public works includes practically all forms of municipal improvements.

3. *"By what departments of the municipal government are such plans being made?"*

As will be seen from the replies listed, the small municipalities depend chiefly on their engineering and public works departments for the preparation of plans, in some cases with the aid of consulting engineers or the local planning board.

4. *"Does your municipality have a planning commission? If so, what responsibilities and powers does that agency have as to post-war planning?"*

As might be expected, these reports from municipalities in the 15,000-25,000 population group show a smaller percentage having a planning commission than in the larger cities; 30 of these places reported no planning commission, 4 left the reply blank, and 2 others stated that the planning commission is not functioning.

5. *"Is your municipality setting aside any reserves, in war bonds or otherwise, for post-war public works?"*

Yes, 27; no, 33; not yet, 3; paying off indebtedness, 1; reply left blank, 3.

The following synposis of this month's replies from municipalities that answered "yes" to question 1 gives the answers to questions 2-5:

Aberdeen, S. Dak.

O. M. Tiffany, Mayor:
2. Street paving, oiling and repairing; repairing and building sidewalks and curbing; new wells; additional standpipe and a secondary water main from pumping station; new library; community center
3. Mayor's Office; Park and Library Boards; Departments of Water and Sewer, and Streets and Public Buildings
4. Planning Commission's powers are purely exploratory and advisory. Final action must rest with the City Commission and with the voters who must approve the bond issues, if such be needed
5. No. We are trying to pay up outstanding indebtedness as fast as possible, so that when the proper time comes, we will be able to finance the necessary projects

Aberdeen, Wash.

N. J. Salmon, Assistant City Engineer:
2. Highways; modernization of water auxiliary pumping plant and of water distribution system; new city hall; airport
3. Engineering and Water Departments
4. Planning Commission is a recognized function of the city government
5. Yes

Burlingame, Calif.

G. S. Whitehead, Engineer:
2. Drainage; street widenings; underpass; park and recreation developments
3. Engineering Department and City Planning Commission
4. Recommendation
5. Yes

Englewood, N. J.

G. Russell Hartley, City Enineer:
2. Sewage disposal plant; trunk sanitary sewers; main drainage stream widening; street reconstruction
3. Engineering Department
4. Advisory
5. Yes. Cash reserve at present in Sanitary Sewer Division.

Euclid, Ohio

Kenneth J. Sims, Mayor:
2. Sanitary and storm sewers; sewage disposal plant; garbage incinerator expansion; street construction, reconstruction and maintenance; water mains; garage and service building; grade elimination; parks, playgrounds, and recreation
3. Engineering Department
4. Planning Commission's duties are limited
5. No

Eugene, Ore.

Elisha Large, Mayor:
2. High school; sewage disposal plant; swimming pool; other small projects
3. City Engineer, together with a Consulting Engineer
4. Planning Commission has no enforcing power
5. City has already accumulated $100,000 for that purpose

Fort Lauderdale, Fla.

A. J. Merrill, City Manager:
2. Enlargement of park; new cemetery
3. ———
4. Commission works with and through its Planning and Zoning Board
5. ———

Glens Falls, N. Y.

John Bazinet, Mayor:
2. Water purification plant and improvement of supply line
3. Water Department
4. City Planning Commission not functioning
5. No

Grand Forks, N. Dak.

A. F. Hulteng, City Engineer
2. Sewer and water mains; incinerator; auditorium; pavement; city-wide storm sewer system; additions to sewage disposal and water treatment plants; airport development
3. City Engineering Department
4. Planning Commission not active
5. Yes, for auditorium only

Greenfield, Mass.

James A. Britton, Chairman, Planning Board:
2. Construction of new municipal buildings; sewer and water main extensions; road construction
3. Greenfield Planning Board
4. None, except to investigate and recommend projects to the town for their consideration
5. Yes. $180,000 has been approved to date for the purchase of bonds for a "Post-War Building Fund"

Greensburg, Pa.

Henry S. Coshey, Mayor:
2. Enlargement of city parks; streets; sewers; sewerage disposal plant; city hall; two fire stations
3. Engineering Department
4. Passes on plans when presented by Council
5. No

Idaho Falls, Idaho

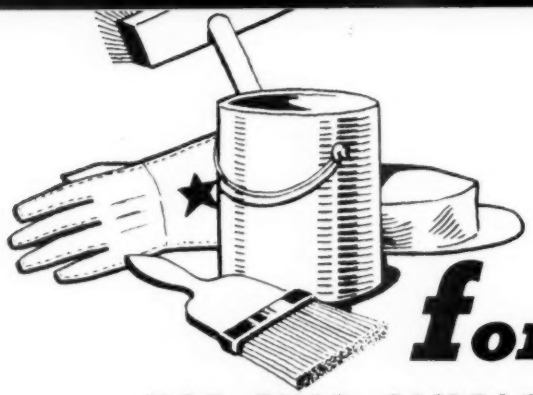
E. W. Fanning, Mayor:
2. Municipal auditorium; sewage disposal system; paving districts; storm and sanitary sewers; electric power development; parking lots
3. Engineering Department
4. No official planning commission
5. Yes. War bonds

Kewanee, Ill.

J. A. Todd, City Clerk:
2. Paving; sewer; watermains; incinerator; water works and electric light expansion
3. Engineering Department
4. No city planning commission
5. No

Lackawanna, N. Y.

T. N. McCormick, City Engineer:
2. Remodeling sewage disposal plant; sewer extensions; sidewalks; city garage
3. Department of Public Works
4. To advise and recommend
5. No. I believe there are restrictions as to setting up sinking funds in third-class cities in this State



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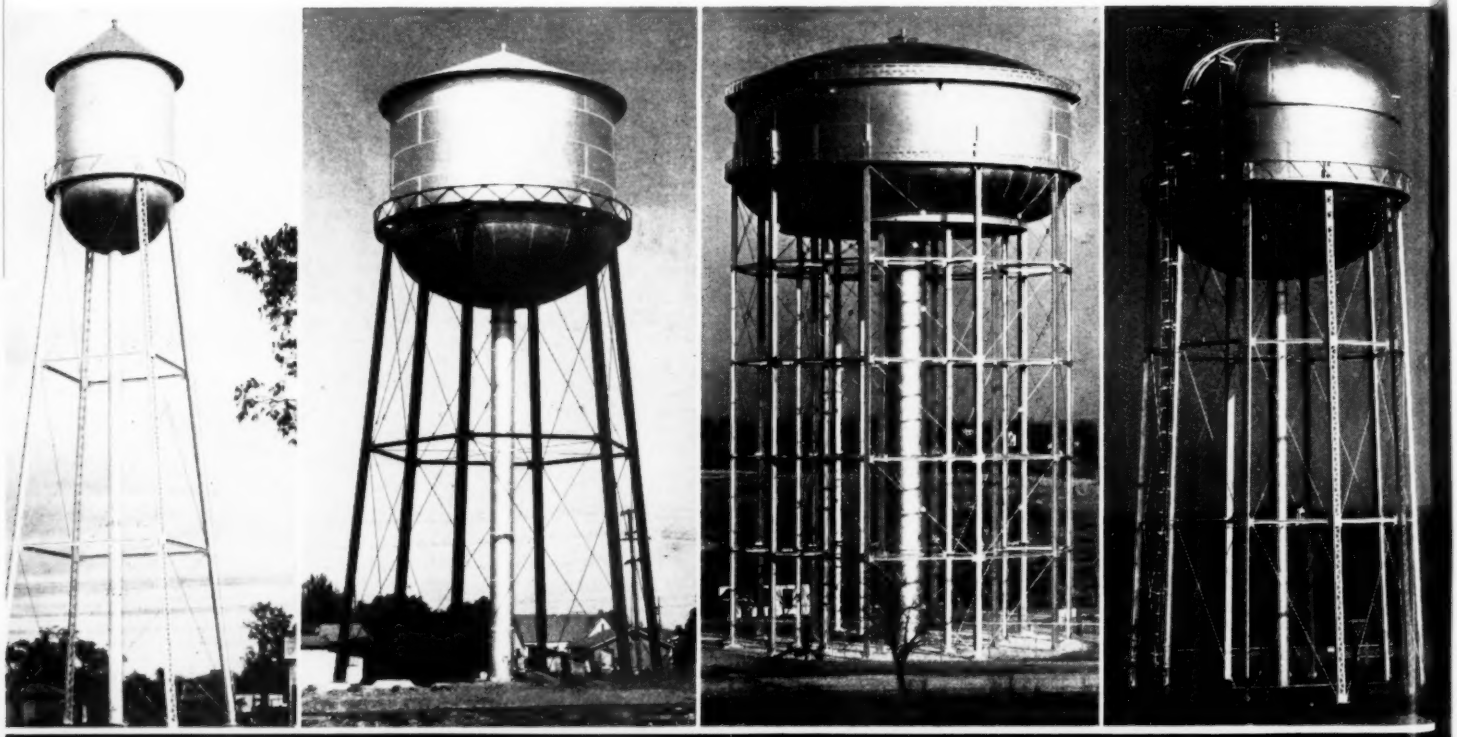

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Leominster, Mass.

THEIAS LAPIERRE, Mayor:
2. Street and sidewalk improvement; clear and grub land on watershed; construct sewage collection system, manholes, and appurtenant work
3. Departments of Streets and Sewers, and Water; Planning Board
4. Study proposed plans and report suggestions to Mayor and Council
5. Yes. It has been voted to purchase $50,000 in war bonds

Logansport, Ind.

RUSSELL F. LEONARD, Mayor:
2. Purchase of site for city airport; boiler for municipal light plant; addition for municipal golf course; municipal swimming pool
3. Lighting and Park Departments
4. ———
5. Some funds are available

Manitowoc, Wis.

MARTIN GEORGENSON, Mayor:
2. Covering practically every type of improvement ordinarily found in municipal government
3. City Plan Commission in conjunction with the City Council
4. Prepare plans and submit them to City Council for their consideration
5. Yes. $25,000 for 1943

Marshalltown, Iowa

W. B. HULL, Mayor:
2. Street and bridge work; storm sewers; resurfacing; extension water mains; airport; playgrounds
3. City Council and City Engineer
4. ———
5. No

North Tonawanda, N. Y.

JOHN E. WALLACE, Mayor:
2. Sewage disposal plant and interceptor sewer; storm water sewers; improvements and additions to water supply; new fire station
3. Engineering Department
4. ———
5. ———

Palo Alto, Calif.

L. HAROLD ANDERSON, City Engineer:
2. Projects for Departments of Public Works, Recreation, Health, Fire, and Police; Animal Shelter; Public Library
3. Departments concerned
4. Advisory powers. Projects submitted are now being reviewed by Council Committees and the Planning Commission with the thought of outlining a financial program
5. Yes, in a minor way

Provo, Utah

E. A. JACOB, City Engineer:
2. Water works; sewage disposal plant; sewer interceptors; street paving, curb and gutter; sidewalks
3. Engineering Department
4. City has a Zoning Commission which at present is functioning as a Planning Commission
5. No

Reno, Nev.

A. C. FROHLICH, Mayor:
2. Surface drainage; sewerage; protection of children from irrigation canals; city hall
3. Engineering Department and Administrative
4. No planning commission
5. No

Sunbury, Pa.

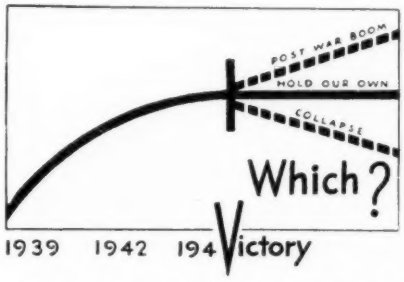
MORRIS R. MICHAELS, Mayor:
2. Conduiting sewer; macadamizing streets
3. City Council and Departments of Streets and Public Improvements
4. No planning commission
5. Cash reserves

Torrington, Conn.

WILLIAM F. NIERINTZ, City Engineer:
2. Roads; bridges; sanitary sewers; storm sewers; widening of congested sections of streets
3. Department of Engineering
4. No city planning commisison
5. No

Walla Walla, Wash.

HERBERT G. WEST, Mayor:
2. Swimming pool; golf course; increased playground equipment; police building; street maintenance and extension
3. Department of Street, Park, and Police
4. Planning projects, but City Commission retains the sole power and authority to execute such policy



This chart is from the front cover of the first of a series of bulletins on "Post-War Readjustments," now being issued occasionally by the Committee on Economic Policy of the Chamber of Commerce of the U. S. As explained in a foreword by the Chamber's General Manager, Ralph Bradford, these bulletins "are intended to help point to the things which must be done if we are to have the largest degree of individual freedom and the best standards of living. . . . We can help in our time by making a conscious and deliberate application of our thinking towards today's approach to the problems of tomorrow."

5. Yes. Reserve funds are authorized by State law and moneys are being set aside as currently available.

Whittier, Calif.

FRANK B. CHANDLER, Mayor:
2. New sewer plant; municipal buildings; street improvement
3. Engineering Department; Planning Commission; City Council
4. Advisory
5. Yes

Replies from three cities in the 25,000-50,000 population group, received too late for the February, 1943, compilation:

Cumberland, Md.

RALPH L. RIZER, City Engineer:
2. Water main; sanitary sewer
3. Engineering Department
4. No planning commission
5. Not yet

Lexington, Ky.

M. J. MCGRUDER, City Engineer:
2. Streets; sewers; incinerator; addition to disposal plant
3. City Engineering Department
4. Nothing being done
5. Yes. Sewer rentals from suburbs for sewers and disposal plant

San Bernardino, Calif.

W. C. SECCOMBE, Mayor:
2. Swimming pool; fire stations; removal of cemetery; building for police department; police court and jail; library; public rest rooms and toilets; safe crossing for school children; flood control; sewers
3. Engineering: Administrative
4. Only as to location of certain types of buildings
5. Unable to do so financially

How the Voters Feel About City Planning for Post-War Needs

IN a recent public opinion survey, in which about 1,000 citizens were interviewed, the Civic Research Institute of Kansas City, Mo., brought to light considerable concern over post-war problems. The results are summarized as follows:

Only one-fourth think times will be "pretty good" for ten years after the war. Almost half anticipate a serious depression if the government has no public relief program.

Seven out of ten think a post-war public work program will be needed in Kansas City after the war. (Most think of it in terms of providing needed work, rather than to meet need for construction.)

A majority think public work plans should be worked out *now not later.*"

Weight of opinion is toward *giving the city*, rather than the federal government, responsibility for working out plans. (But when it comes to the sordid question of *who should put up the money*, opinion shifts toward giving city and federal government equal responsibility.)

A majority would like to see the city put money aside *now* for post-war public work construction.

BUT,

Public concern over post-war problems has not yet crystallized into a coherent structure. When people are asked whether present city services should be cut in order to build up a reserve fund for post-war public work, *about two-thirds are reluctant to do without the services.*

Airplane and World Peace

(Continued from page 5)

transcends any single country in importance. Is world unity to be achieved by some ruthless, militaristic power and maintained by all the resources of transportation and communication much as the British and Dutch empires were held together? Or by some new League of Nations with power to enforce its decisions, or by some federation of states? This is the issue. It is an issue much older than the airplane, but it is an issue which can no longer be evaded. Isolation and the airplane cannot go together."

Plangineering—Something to Do NOW to Avoid Slack at War's End

"Plangineering" is not just *talking* about post-war projects. It is doing something about them NOW!

Now? With the manpower shortage and with *permanent* high-grade materials and equipment so hard to get even on priority?

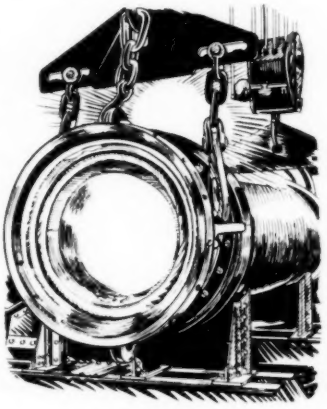
Yes, NOW! Many a water works, sewerage, gas, and pipe-line system will need re-vamping after the war. Why waste valuable months when with "plangineering" you can be ready to start necessary work almost immediately at war's end?

How? *Plangineer*—write down a list of the things you would do on your system within the next year if the war ended this month. Turn it over to one of your remaining technical men or a consulting engineer and instruct him:

(1) To work up a skeleton set of plans and specifications.

(2) To prepare a bill of materials, paying particular attention to the elimination of war-time "makeshifts," and their replacement with materials of time-tested permanency — corrosion resisting cast iron pipe, for instance, now made in accordance with the recently adopted A. S. A. LAW OF DESIGN.*

(3) To estimate the cost, based on the 1940 level (or some other year). This will give a *base* estimate readily adjusted up or down percentagewise with sufficient accuracy to approximate material and labor costs current after the war. This will give a base for promptly discussing and arranging financing if necessary.



(4) Review the list at six-month intervals, and revise plans, specifications and estimate accordingly.

PLANGINEER NOW to insure a quick start on needed improvements and conversions immediately the war ends. Our soldiers need not be out of jobs when they return home if enough of us do "plangineering."

* We shall gladly send you a copy of the American Standards Association LAW OF DESIGN FOR CAST IRON PIPE. By following the A.S.A. LAW OF DESIGN, weights and thicknesses of cast iron pipe can be scientifically designed for specific laying conditions. No more guessing when writing specifications. You get the ***exact*** pipe your conditions call for. Economy with safety is the result. Long life with low maintenance, too.

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Most of our manufacturing facilities are devoted to these tank-recovery trucks, and special pumpers which we are turning out for the armed forces. However, we have so far been able to continue making special civilian fire fighting units. If your need is urgent, please write us about your requirements. We shall be glad to give you full information on obtaining specially engineered equipment, and the proper procedure in securing necessary authorization to purchase it.

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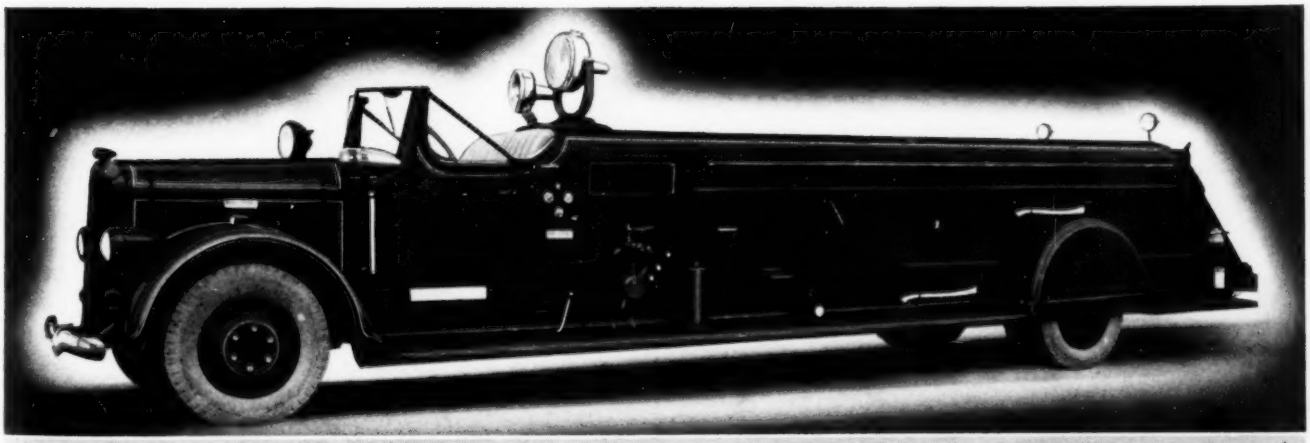
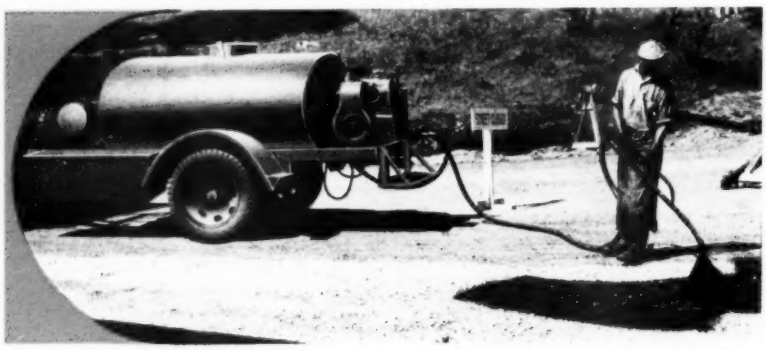


WARD LaFRANCE

© 1943 Great American Industries, Inc., Meriden, Conn.

A Patch Won't Cure a Subgrade Failure

• *Shooting a prime coat on a completely rebuilt base in Texas with a 1250-gallon Model 400 distributor.*



• *After the base has been rebuilt, a patch of the same material as the surrounding area is put down with a 600-gallon Model SJ.*

• *Waterproofing a road in Tennessee with a truck mounted 1000-gallon fully insulated Model 400 distributor.*

If failure is due to a weak base or water seepage, it is better to completely remove the faulty section, provide adequate drainage, repair foundation, then cover with a patching mixture of same character as old surface. Spread mixture and compact into place.

If necessary to remove an entire base section in making a repair, cut surface back at least six inches beyond old section so that new surface will extend over and lap the old base, thus lessening chance for settlement and cracking.

When failure is caused entirely from seepage, it is often possible to repair this depressed section with a patch. Then cover patch as well as part of surrounding area with a short cover coat. This increases the strength and thickness of surface and better protects the base.

After repairs are made and where considerable seepage has occurred, a water proofing course over complete roadway is your best insurance against future failures.

Information on your particular sub-grade problem can be obtained by writing the Asphalt Institute, 801 Second Avenue, New York City.

For maintenance equipment, write direct so that we can give you name of your nearest dealer.

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Senator Thomas Introduces Bill For Federal Aid to Urban Redevelopment

ESTABLISHMENT of an Urban Redevelopment Agency in the Federal Government to provide assistance to municipalities for planned revitalizing is the purpose of a bill (S. 953) introduced in the Senate of the United States on April 2 by Senator Elbert D. Thomas of Utah.

The preamble to the bill states that "This Act provides for the coordination of the locally planned development of urban areas with Federal activities and private enterprise in such areas, and thereby encourages local autonomy and private initiative within a broad and flexible framework of public policy and procedure."

Under the terms of the bill, it would be the province and duty of the new agency, headed by a Federal Urban Redevelopment Administrator:

"to foster the economically sound and socially beneficial development of the urban areas of the United States in accordance with the comprehensive planning of such areas or of the municipalities therein; to diffuse amongst the people of the United States useful information on urban planning, particularly as affecting or affected by the national economy; to institute research into the economic and social factors of the physical development of urban communities and to analyze, organize, and disseminate the results thereof; to promote sound principles, methods, and criteria of municipal and urban area planning and development and improved financial and other mechanisms for execution of such plans; and to assist in the coordination between Federal policies and urban development."

The bill would make available $150,000,000 for "advances" to municipalities for the acquisition of real property for development or redevelopment purposes. Such advances would be repayable by the municipality, and this obligation would be evidenced by income debentures carrying 2 per cent interest. The obligation would not be a lien again the general credit of the city. The advances would be payable out of the municipality's rentals and revenues from the redevelopment project areas; and all the net rentals and revenues of all of the redevelopment project areas in any municipality are required to be pooled as a security for all of the advances to such municipality.

An important feature of Senator Thomas' measure is its requirement that advances shall be made only to municipalities that have a planning agency and a master plan, the essentials of which are carefully specified in the proposed act. Indeed, the bill is unique in providing, through Federal aid, for planning which has both a directive and an implementation; it proposes a definite way to facilitate the acquisition of land and requires certain planning as a prerequisite to determination of what the promised aid will be.

The planning agency would designate the boundaries of the successive redevelopment areas, and make the land-use or site plan of each redevelopment, together with the standards of building intensity and open spaces, subject to the approval of the municipal legislative body, and they could adopt a plan made by the prospective redevelopment corporation lessee.

Land to Be Leased, Not Sold

Land acquired through such Federal aid for a project area development would remain permanently in public ownership. An agreement with the Administrator would be required that the municipal borrower:

"will transfer to or place under the jurisdiction of the appropriate public bodies, administrative officers, departments, and agencies those pieces of real property which, in accordance with the project area development plan, are to be devoted to construction, operation, or use by the municipality or other political subdivisions, such as the streets and other public utilities and works, public recreational spaces, schools and other public uses (except public housing); and that it will, without public bidding but after a public hearing upon the proposed lease, lease as an entirety the remainder of the project area which, in accordance with the plan, is to be devoted to public housing or to private housing, industry, business or other private uses, or to mixtures or combinations of such uses, to a qualified corporation or public housing authority.

"The initial term of any such lease shall not exceed thirty years; but the instrument of lease may provide for renewals upon reappraisals and with rentals and other provisions adjusted to such reappraisals. Every such lease shall provide that the lessee, its successors, assigns, and subtenants shall carry out or cause to be carried out the approved project area development plan or approved modifications thereof in accordance with the time schedule specified in the plan or modifications, and that no use shall be made of any land included in the lease nor any building or structure erected thereon nor any use of any such building or structure which does not conform to such plan or modifications."

Loans for Planning

A separate title of the proposed act would authorize the Administrator to make advances to or for planning agencies of municipalities; the amount of such advances to range from not more than 20 cents per capita of large cities to not more than 40 cents for small cities.

After being introduced by Senator Thomas, this bill (S. 953) was referred to the Special Committee on Post-War Economic Policy and Planning. Recent clarificaton of the purpose of that committee caused the bill to be reassigned to the Committee on Education and Labor.

"From War to Work"

HOW to get full employment and keep it going is the theme of a special number of *Survey Graphic*. "From War to Work," just published. In this May issue, spokesmen for business, labor, government, and other experts come to grips with the problem of post-war employment.

The eighteen contributors point out that only if we can offer jobs to the 33,000,000 Americans who must be transferred to peacetime occupations when the Axis surrenders, will we prevent a return to the dour Thirties. Stuart Chase is special editor of this number, eight in *Survey Graphic's* wartime "Calling America" series.

Other contributors include A. F. Hinrichs, acting Commissioner of Labor Statistics in the U. S. Department of Labor; Beardsley Ruml, chairman of the Federal Reserve Bank of New York; Elmo Roper, well-known director of public opinion polls; Marriner S. Eccles, chairman of the Board of Governors, Federal Reserve System; Samuel S. Fels, president, Fels and Co.; Carter Goodrich, chairman of the Governing Body of the International Labor Office; Arthur Greenwood, Labor Member of Parliament; Luther Gulick, Office of Foreign Relief and Rehabilitation Operations; Alvin H. Hansen, professor of political economy at Harvard; Sidney Hillman, president of the Amalgamated Clothing Workers of America; Paul G. Hoffman, president of The Studebaker Corporation; Russell Lord, editor of "The Land"; Lewis L. Lorwin, of the National Resources Planning Board; Frieda S. Miller, former New York State Industrial Commissioner; Walter Nash, Minister to the United States from New Zealand; Maxwell S. Stewart, expert on social insurance; Pierre Waelbroeck, chief of the employment and migration section, International Labour Office.

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CAST IRON PIPE

AGAIN AVAILABLE

This Easy-to-Lay, Corrosion-Resisting Pipe Can Now Be Supplied on Any Rating of A-10 or Better. Prompt Deliveries!

America's war needs come first . . . but we are now in a position to take care of many industrial and municipal requirements in addition to government orders.

McWane-Pacific Cast Iron Pipe is noted for its corrosion-resisting permanence, excellent machinability, strength, flexibility, ease of laying. By every standard, it's the *economical* pipe to use underground.

Available in all sizes, 2" through 12", with famous self-tightening McWane Precalked Joint, Open Bell, Oversize Threaded (on 2" and 3" sizes) and Gland Type Joints. Fittings, too.

Also — Pacific States
Gate Valves
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On AA-5 rating or better

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About . . .

Sludge Gas Engines

Showing How Profitable This Source of Power Can Be When Conditions Are Favorable

By HENRY W. TAYLOR

DURING the last two months we have briefly examined some of the fundamentals involved in the use of digester gas for power. We also have analyzed a situation at a small plant where the use of this gas is just beginning to be profitable. This month let us look at a set of conditions that will allow the gas and other by-products to show a sound, substantial margin of profit.

This centers around an actual city of 50,000 population now studying the possibilities of sewage treatment. Both garbage and sewage will be disposed of in the same plant with the ground garbage being added to the sludge. As will subsequently be disclosed, the city also can capitalize on a fortunate situation for the disposal of digested sludge.

Earning Possibilities

These conditions make the plant set-up so favorable that it should be able to earn an income large enough to pay for all operating and interest charges and assist in amortizing the bonded indebtedness as well.

In this particular city, the sewage can be delivered by gravity to the outskirts of the town near a thrifty and progressive industrial section. These industries require heat and power to operate and have shown an interest in the power-producing features of the proposed plant. Among these industries is also a commercial fertilizer plant that has shown a marked interest in the digested sludge.

Plant Facilities

The treatment at the proposed plant will be limited to the primary phases only, with post-chlorination added for a few of the summer months. Ground garbage, as mentioned previously, will be added to the primary sludge tanks. This, incidentally, will solve a ticklish garbage removal problem.

The balance of the rubbish will be destroyed by a new incinerator to be constructed adjacent to the sewage-treatment plant. The importance and economic place of this unit will be seen later.

Don't Let Your Plant Be Lazy

An example of how important careful planning is in the complete development of municipal services. A sewage-treatment plant or an incinerator is more than just an individual operating unit. It is part of the city itself.

Studies and analyses of the methods by which these plants may fit themselves into the municipal scheme can reveal a number of possibilities leading to greater service as well as economic benefits.

Power Assets

The first asset is the sewage-garbage sludge gas. On the basis of two cubic feet of gas per capita per day—a customary figure when garbage and sludge are digested together—this should produce approximately 100,000 cubic feet of gas daily. When used in properly designed engine-generator units, it will result in a daily power output of 4,000 kwhrs. Heat from the engine jacket water should be sufficient to maintain optimum digestion tank temperatures if the tanks are well insulated and the transfer of sludge from the settling tanks is carefully timed. The heat in the exhaust gases, amounting to about 22,000,000 Btu, can be utilized in a waste heat boiler and will produce an additional 520 kwhrs per day.

The next asset is the steam that can be produced by the rubbish incinerator. This rubbish can be estimated at not less than 25 tons per day, and the power output in a well-designed destructor at a minimum of 6,500 kwhrs.

Total Power

If the heat from both these sources were converted into power and combined with the power from the sludge-gas engines, the aggregate would approximate 11,000 kwhrs daily. Although the value of this power would depend upon the industrial demand, the competitive rates, and other limiting conditions, it can be estimated safely at not less than one cent per kwhr and be evaluated at $110 per day or $40,000 per year.

It is probable that all the heat would not be translated into power. Some might be sold directly as process heat. However, if this type of heat were salable, the value mentioned previously would not be reduced.

Digested Sludge

Aside from the power-production features of the plant, the efficient disposal of the sludge will eliminate one of the troublesome angles of sewage treatment and yield a certain amount of income as well. However, this possibility needs thorough exploration to determine the amount of conditioning the sludge requires to meet the fertilizer manufacturer's specifications.

Potential Earning Power

Without attempting to evaluate the income from the sale of sludge, the power-producing features alone will earn approximately $40,000 per year. Preliminary estimates place the cost of the treatment plant and incinerator at $400,000, not including the cost of the interceptor sewers. At an interest rate of three per cent—liberal for municipal obligations of this kind—$12,000 would be required annually. Out of the remaining $28,000, operation of the plant should require less than $20,000, thus leaving a balance to assest in amortizing the bonded indebtedness.

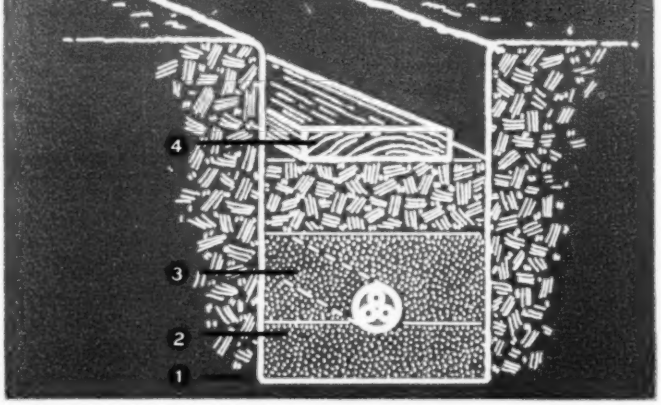
Other Possibilities

This, of course, does not exhaust the possibilities that resourceful engineering and operation can develop in the sewage treatment field. Sewage gas is powerful and should have a better use than simply that of being burned in a waste-heat boiler.

Next month Mr. Taylor will discuss airport runways, basing his analysis on a viewpoint slightly different from the normal one.

This is the Way to Install Cable

WHEN BURYING IT DIRECT



While certain types of underground cable for direct burial are often plowed in, when installing the more expensive high tension cables, or cables for extremely critical circuits, further precautions will prolong their useful life and prevent service interruptions caused by mechanical damage, regardless of the type of insulation and covering used.

HERE'S HOW IT'S DONE:

1. Dig trench deep enough (at least 18-in.), so cable will not be disturbed by plowing, surface digging or paving excavation.

2. It is preferable to lay a sand cushion, or at least have base of trench loosened so it is cleared of rocks and other rough projections.

3. After laying cable and before backfilling, cover it with soft earth or sand, free from stones, rocks, etc., so they won't press against the cable when flooding or frost-heaving disturbs the surrounding earth.

4. A creosoted plank or concrete slab, laid six to eight inches above the cable, gives additional protection and warns workmen of its presence when digging over the cable.

Under highways and railroad rights-of-way, it is usually best to pull the cable through a pipe or conduit.

Such protection is particularly desirable for non-metallic underground cable. But even when metallic-armored (steel taped, etc.) cable is used, it is desirable to have this more complete protection. Naturally, the extent of protection depends upon the type of soil as well as the likelihood of disturbance, such as in urban areas where the majority of digging and excavating occurs.

HAZARD INSULATED WIRE WORKS
DIVISION OF THE OKONITE COMPANY
Works: Wilkes-Barre, Pennsylvania
Offices in Principal Cities

3226

Here's why these preventative measures increase the life of cable:

a Rocks and other sharp projections will not bruise or deform the cable insulation if extraordinary pressures develop.

b Better packing permits improved heat dissipation and paves the way for longer cable life and greater efficiency.

Hazard engineers are experts in the production, installation and maintenance of electrical wires and cables. Why not consult them about *any* cable problem?

Even the best installation practice does not help much unless the original cable is properly designed. To relieve any doubt specify:

Hazard Armortite non-metallic underground

HAZARD ARMY E NAVY

Electrical Wires and Cables

Hazard lead and steel-taped Parkway

Snuffing Fires With CO_2

(Continued from page 56)

for the use of carbon-dioxide gas are specified for use either singly or in combination.

1. Total Flooding.

2. Local Application in which carbon dioxide is applied directly to the fire.

3. Extended Discharge. In some "Total Flooding" methods, such as for ship cargoes, it is necessary to create extinguishing gas concentrations which require a prolonged or intermittent discharge of the gas.

The variety of hazards which may be protected by carbon-dioxide extinguishing systems is considerable. Attention is called to the fact that carbon-dioxide protection is especially adapted to extinguishment of fires in flammable liquids, in vaults for storage of records, and in all sorts of enclosed loose stocks, such as book stacks in libraries, and activated carbon stored for use in water treatment plants. The fast-burning hazards are the most easily extinguished by carbon-dioxide protection, providing a large amount of gas is applied quickly. For the protection of slower burning materials, a slower application of gas is effective, but it must be continued for a long time.

This article is from a new publication of the National Fire Protection Association presenting standards also adopted by the National Board of Fire Underwriters covering carbon-dioxide extinguishing systems. For a copy of the complete booklet, write THE AMERICAN CITY, 470 Fourth Ave., New York City.

Old Dutch City

(Continued from page 43)

teries leading across the greenbelt. Through this plan of development there was no possibility for subdividers, speculators, or other real estate agencies to monopolize lands and cause the city to grow in a lopsided fashion. In many of our present towns it is noticed that expansion takes place in irregular shapes, making it difficult to provide adequate traffic circulation and utilities at a nominal cost. Haphazard developments in most instances leave only the undesirable lands to the city for installation of parks, playgrounds, schools, and other public buildings, and offer no opportunity for efficient or coordinated planning. By controlling the open area around the city, Molleboon profited in that it was able to prevent an otherwise whimsical development of unfortunate locations of slums, inadequate street facilities, and other detrimental aspects.

Welcoming New Citizens

NEW Voters' day in the Detroit area will be observed with appropriate ceremonies Sunday, May 16. This will be another annual celebration of the kind inspired a few years ago by the people of Manitowoc, Wis.

Chief emphasis will be put on the elaborate program which again will be presented in the main auditorium of the Art Institute at 8 p.m., under auspices of a score of organizations, including Detroit Citizens League. Press announcements will give details. The purpose is to welcome to the ranks of citizenship those young people who will have reached the voting age of 21, and include representation from the thousands of New Americans who will have completed the process of naturalization.

Citations for Distinguished Civic Service

For the eleventh consecutive year, the Chamber of Commerce and Civics of the Oranges and Maplewood, New Jersey, has awarded a Distinguished Service Citation to an outstanding citizen. This year the award, announced at the 1943 annual meeting of the Chamber, went to George Edward Stringfellow.

The speech of presentation by another outstanding civic leader, William J. Orchard, expressed the opinion that this annual award of a citation for distinguished service constitutes one of the finest contributions to the community life by the Chamber of Commerce—a civic and commercial group which for 30 years has been serving the common interests of five contiguous municipalities of East Orange, Orange, West Orange, South Orange, and Maplewood.

To Communities Where Critical Housing Shortages Exist:

A Threefold Appeal from NHA on Behalf of War Workers

IS your city one of the hundreds of communities throughout the nation where industries are clamoring for workers and workers are searching in vain for decent places in which to live?

And is it evident that, because of shortages of critical materials, new housing construction cannot possibly meet these urgent needs?

If the answer to both questions is *yes*, your municipal officials and community leaders can render an important patriotic service by cooperating with the National Housing Agency's efforts to meet the problem.

Home Use Service Program

In communities where critical housing shortages exist, NHA makes this threefold appeal:

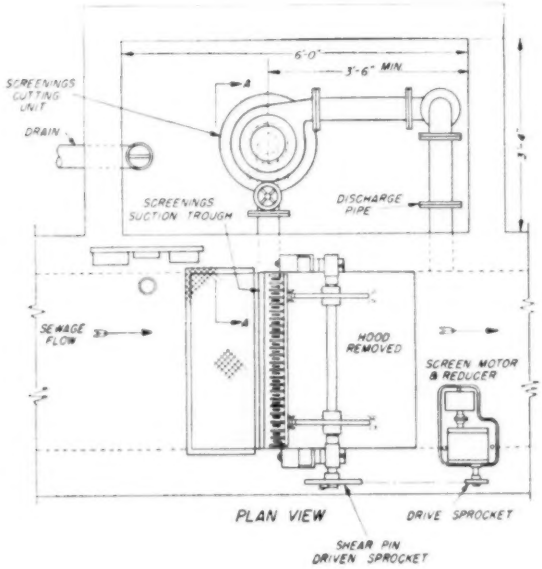
1. It urges property owners to make available to war workers and their families all vacant houses, apartments, and rooms suitable for use without the necessity of alterations and the expenditure of critical materials.

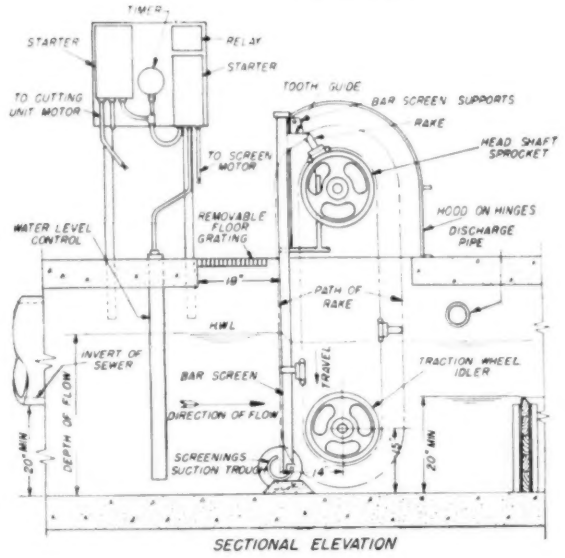
2. It urges the owners of other properties, not now suitable for maximum use, to convert them into additional units with their own funds or with the assistance of financing institutions.

3. If property owners are unable or unwilling to take this step, the NHA offers to lease houses and buildings in the name of the Government and convert them with Government funds. This leasing program is confined to certain "super critical" communities. Under this program, the HOLC manages and maintains the property. It takes over mortgage and tax payments for the term of the lease, and pays the owner a net rental agreed upon in advance.

War Housing Centers have been established in some 125 communities, and in about 100 less critical areas Homes Registration Offices are rendering limited services of a similar character. Persons desirous of cooperating with this Homes Use Service Program should get in touch with these local War Housing Centers. An April 1943 leaflet, "Wanted: a Place to Live," is available on application to the War Housing Centers or to the Community Participation Section of the National Housing Agency, Washington, D. C.

"American" Pump Screen

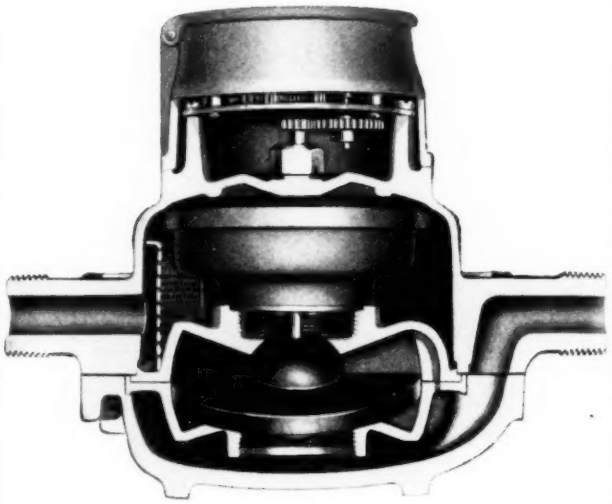




THE "AMERICAN" PUMP SCREEN is a working combination of a bar screen and cutting pump. Solids are screened from the sewage, discharged from the screen to suction trough of cutting pump, cut into fine particles and passed on with the sewage.

Buy American

THE AMERICAN WELL WORKS
AURORA ILLINOIS
MANUFACTURERS OF
Pumping.—Sewage Treatment.—
Water Purification Equipment



To Waterworks Men who "can't use" iron case water meters—

If you always bought water meters with bronze casings, don't despair over the present limitations on copper alloys. Iron case meters may prove better than you believed possible. In water containing bicarbonate hardness, the iron casing tends to attract corrosion and mineral deposits harmlessly to itself, leaving the bronze works undamaged for extra years.

But the meter should be designed for iron-case manufacture, so the works never stick in the casing. Niagara design permits a meter always to be disassembled easily, for cleaning or repairs. That is one of the features that has made Niagara the *standard* iron case meter for many years before the present emergency.

After the war, if you wish to convert to bronze casings, they will be fully interchangeable. American bronze meters differ from the Niagara only in the material of the casing.

BUFFALO METER COMPANY

2902 MAIN STREET BUFFALO, N. Y.

A "Practical" Planner Questions a "Dreamer"

Are the Circulatory Systems of the Human Body and of Urban Traffic Comparable?

TO the Editor of THE AMERICAN CITY:

I have read the article by Eliel Saarinen entitled "Green-Belts, Traffic Efficiency and Quietness of Living in Urban Areas" published in your April number. In commenting, there is no desire to say that dreamers do not sometimes serve useful purposes. Not all dreams are good, though the imagination is where ideas are born. Also, I must confess to a limited understanding of what the article meant. If only some of the expressions often used by the dreamers could be elucidated, those of us who believe in keeping at least one foot on the ground would be better able to figure out what they are driving at.

There is one thing about this article, however, which ought to be challenged seriously, regardless of the eminence of the author. That is the assumption that the traffic of a city, even the "organically decentralized" city, is substantially similar to the traffic in the circulatory system of the human body. By this device, the problems of dealing with city traffic are made to seem very simple, even to the extent that such structures as subways and elevated railways will be unnecessary. Most will agree that the traffic problems of the American city are not simple but very complex.

To Illustrate

The human circulatory system consists of tubing that is flexible and quite elastic. It carries the blood, a fluid which is in constant circulation by reason of a force pump, namely, the heart. Through the infinite wisdom which has created the human body, the supply of this fluid is always adjusted to the capacity of the system and its temperature regulated within very narrow limits. The minute bodies which form a part of this fluid, namely, the corpuscles, have no individual will regarding their motion. They follow the flow of the current as it may be forced by the power back of it, from the heart into the arteries, from the arteries into the veins, and back again to the heart to be recirculated. There are no intermediate intersections. The traffic is all one way, constant or nearly so; at any rate, the traffic load is always adjusted to the capacity of the system, and this relation is preserved regardless of the fact that the speed may vary somewhat according to the activity of the body at any particular time.

How different is the traffic in the circulatory system of a city! It changes greatly over a period of years. About seventy-five years ago, animal-drawn vehicles began to make way for the electric street-car. This increased the areas of concentration in cities. About thirty years ago the electric street-car began to give way to the motor vehicle, whose tendency has been to disperse population. Just at present, motor vehicle traffic is under a serious handicap through the threat of a limited supply of rubber, which if it continues, will again tend toward concentrations nearer the centers of cities.

It is not necessary further to explain the fluctuations of city traffic from season to season, from day to day, from hour to hour. We all know them well. But we must remember that the arteries and veins of the city, that carry its traffic, are as laid down in the first place. The traffic can scarcely be adjusted to them, or they to the traffic. They have numerous intersections such as do not occur in the arteries and veins of the body. The instances where they have been radically readjusted are few and the process has been very painful. Also, each and every motor vehicle, the corpuscles which compose the city traffic stream, has its own detsination, which it wishes to arrive at by the line of least resistance. In the attainment of this objective, these corpuscles move at varying speeds in opposite directions in the same artery, and traverse numerous intersections. In traveling from heart to liver and back again, let us say, city traffic will not be satisfactorily accommodated by a one way route via the big toe. It will want to take the short cuts, and it will take the short cuts, green-belt or no green-belt. In so saying, it is not contended that traffic should not be regulated; it must be. But good sense and judgment are necessary in all things, and will generally result in what seems reasonable to a majority of the people if not to all of them.

Concentration and Decentralization

We hear much that is deserved about the advantages of decentralization, but very little about the advantages of certain concentrations. These are what caused cities to be built in the first place. It is true that city populations have often been concentrated to an extent that is undesirable, but such concentrations have not generally taken place just because people were too foolish to know better. In most cases there have been reasons that were good when the concentrations were made.

As and when we decentralize really and truly, there will be many new and great problems to be solved. Decentralization may mean a flight from evils that we know, to others that we—and the dreamers along with us—know not of. Water supply, sewerage, pavements will be more expensive. Transportation will be more difficult and expensive, but people probably will be satisfied as long as it continues reasonably satisfactory. But if transportation fails (and we have had a taste of such failure), it is doubtful if the green-belts will be sufficiently attractive to restrain a trek back to the center.

The city of the future, no more than the city of the past, will be the realization of any ideatistic conception. It will be the resultant of a series of forces operating over long periods from differing directions and with varying intensities. It will be for the planners of the future to recognize these forces and to try to control them as best they can in the best interest of those who must live with their resultant. This will mean a preservation of the solid advantages of concentration, while eliminating or substantially reducing its undesirable features.

M. W. TORKELSON,
Director of Regional Planning,
State of Wisconsin.

EDITORIAL NOTE.—For the article by Eliel Saarinen which inspired the foregoing letter see the April issue of THE AMERICAN CITY, pages 57-59. Mr. Saarinen's book, "The City: Its Growth, Its Decay, Its Future" is to be published this month.

Municipal Bond Market

The following are some recent sales of new issues as reported in March issues of *The Bond Buyer*:

Amount	Borrower and Purpose	Rate (%)	Term (Years)	Basis (%)
$200,000	Ida Co., Ia., Primary Road Refunding	1.0	6.25 Avg.	0.795
600,000	Buena Vista Co., Ia., Primary Road Refunding	1.0	6.16 Avg.	0.82
150,000	Indianapolis, Ind., Refunding	1.25	11.33 Avg.	1.18
300,000	Houston, Texas, Street Opening and Widening	1.5	1-20 Ser.	1.37
250,000	Tulsa, Okla., School District	4.75	7.75 Avg.	1.434
498,000	Jackson Co., Mo., Road and Bridge	4.25	5.5 Avg.	1.447
185,000	Johnstown, Pa., Refunding	1.5	5.5 Avg.	1.466
960,000	West Virginia, Road	1.5	1-24 Ser.	1.4803
300,000	Tulsa, Okla., City	4.75	8.75 Avg.	1.49
150,000	Rotterdam, N. Y., Sewer	1.70	14.5 Avg.	1.645
1,400,000	Greenville, S. C., Water Works Refunding	1.70	9.25 Avg.	1.66
540,000	Mobile, Ala., Sewer	3.0	17 Avg.	2.88
250,000	Lincoln Park, Mich., School Dist., Refunding	4.0	12.5 Avg.	3.56
2,600,000	Broward County Port Authority, Fla., Refunding	4.0	22.16 Avg.	3.84

RIDE RATIONI
IS NEXT

UNLESS W

TRANSIT riding has leaped from 14.3 bi
sengers in 1941 to 19 billion in 1942—
figure is still rising in '43.

In 12 out of 16 cities recently studied, every available piece of transit equipment is in daily use, and street cars and buses will be unable to carry any additional peak-hour riders. This situation is typical of most cities where staggered hours have not yet been adopted.

It's clear that in these cities some emergency measure *must* be adopted to guarantee rides for those who are essential to the war effort.

One method would be compulsory ride-rationing, in which the privilege of riding at certain hours is limited to certain people. This is a cumbersome system, inflexible, difficult to enforce, and just plain distasteful to most people.

TIGH
BOU

of riding. *Staggered hours* is a simple means of multiplying the effective use of available vehicles. Here's how it works:

Everyone works the same number of hours as before, but starts and stops work slightly earlier or later than usual. Thus, the cars and buses can make two or three trips to carry the people who formerly all wanted to ride at once.

Staggered hours calls for no sacrifices, no surrender of privileges. It is the simplest and best answer to a transit crisis that demands immediate nation-wide action. Don't be satisfied with halfway measures where only office workers, or industrial workers, or stores operate on staggered hours. Make it city-wide. *General Electric Company, Schenectady, N. Y.*

The Army-Navy "E", for Excellence in the manufacture of war equipment, now flies over 88 G-E plants employing 100,000 men and women.

GENERAL ELECTRIC

107-74-560

Traffic Control and Facilitation

Conducted by Traffic Control & Facilitation Committee, Institute of Traffic Engineers, 60 John St., New York
Merwyn Kraft, Chairman, Karl A. Bevins, Jay A. Czizek, A. Wallace Gove, Ross C. Harper, Walter H. Klapproth, Theodore M. Matson, William R. McConchie, Henry W. Osborne, Earl J. Reeder, William J. Weller

Fitting Traffic Control to Wartime

JOSEPH B. EASTMAN, Director of [illegible] of Defense Transporta-

HTLY

UND

ently in operation meets any of the following four requirements, or very

(a) an average of at least 1,000 vehicles per hour, of which at least 250 approach from the minor streets, enter an intersection for 8 hours in a normal day, or

(b) more than 300 pedestrians per hour cross a street which carries an average of at least 750 vehicles per hour for six hours daily.

These are the major tests of the need for signals. However, if a signal pres-

[illegible] af-

fic periods of the day need not be operated as a stop-and-go signal during light traffic hours. Such practices create wasteful delays which can be entirely eliminated if the signal is changed over to flashing operation.

When functioning as a flashing signal, the yellow should be shown in all directions, except when the signal is located on a through street or when the safe approach speed on one of the streets is below 8 miles per hour. In such cases, flashing red should show to traffic approaching on the minor street or the street with low safe approach speed.

The standard meaning of flashing yellow is "proceed with caution," while the standard meaning of flashing red is "first stop, and then proceed with caution."

3. Shortened Signal Cycles*

Signal cycles should be as short as possible; long enough only to accommodate all necessary movements.

Signal cycles ranging in length from 35 to 50 seconds have been found fully adequate at the usual right-angle two-way intersection. Longer cycles create dissatisfaction, introduce unnecessary delay and discourage observance of the signals both by vehicle drivers and by pedestrians, more particularly the latter.

The exact conditions under which cycles in excess of 50 seconds may be required cannot be predetermined, and so each coordinated system now operating on longer than 50-second cycles should be carefully checked by competent traffic engineers to determine the shortest cycle length that may be practicable.

One further situation in which cycles longer than 50 seconds may be justified is that of a heavily-traveled main thoroughfare carrying large volumes of truck or bus traffic which must be expedited at the expense of a few vehicles on minor intersecting streets.

4. Adjustment of Green Period

The time allotted to the green period on intersecting streets should be accurately adjusted to the time required to move cross traffic. Usually the proportion of the cycle devoted to the green period on each intersecting street should conform to the relative volume of traffic per lane on such intersecting street. This general principle may have to be modified on streets carrying trucks, buses and street cars, because due to their larger size and slower starting they require more time to clear the intersection than do the lighter and faster passenger automobiles. Most fixed time signal controllers are designed to permit a variation of the stop-and-go intervals to cover all

* Hereafter called the "Manual." Published November, 1942. Prepared by a joint committee of the American Association of State Highway Officials, Institute of Traffic Engineers, and National Conference on Street and Highway Safety, with the advice and assistance of the War Department and the Office of Civilian Defense. Traffic authorities may obtain copies from the Public Roads Administration, Washington, D. C.

* Most traffic-actuated signals, with actuation on both streets, are so constructed as to provide automatically for the changes recommended in items 3, 4 and 5 and so, ordinarily, will not require attention because of traffic variations.

it Bearer to Ride
nent of regular fare
the vehicles of
Local Transit Co.
Between the hours of
7 and 8 a.m. and 4 and 5 p.m.
NOT TRANSFERABLE

RIDE RATIONING IS NEXT

UNLESS WORKING HOURS ARE STAGGERED

TRANSIT riding has leaped from 14.3 billion passengers in 1941 to 19 billion in 1942—and that figure is still rising in '43.

In 12 out of 16 cities recently studied, every available piece of transit equipment is in daily use, and street cars and buses will be unable to carry any additional peak-hour riders. This situation is typical of most cities where staggered hours have not yet been adopted.

It's clear that in these cities some emergency measure *must* be adopted to guarantee rides for those who are essential to the war effort.

One method would be compulsory ride-rationing, in which the privilege of riding at certain hours is limited to certain people. This is a cumbersome system, inflexible, difficult to enforce, and just plain distasteful to most people.

You'll find that the staggered-hours plan achieves the effects of ride rationing without denying anyone the privilege of riding. *Staggered hours* is a simple means of multiplying the effective use of available vehicles. Here's how it works:

Everyone works the same number of hours as before, but starts and stops work slightly earlier or later than usual. Thus, the cars and buses can make two or three trips to carry the people who formerly all wanted to ride at once.

Staggered hours calls for no sacrifices, no surrender of privileges. It is the simplest and best answer to a transit crisis that demands immediate nation-wide action. Don't be satisfied with halfway measures where only office workers, or industrial workers, or stores operate on staggered hours. Make it city-wide. *General Electric Company, Schenectady, N. Y.*

The Army-Navy "E", for Excellence in the manufacture of war equipment, now flies over 100 G-E plants employing 100,000 men and women.

GENERAL ELECTRIC

107-74-9660

Traffic Control and Facilitation

Conducted by Traffic Control & Facilitation Committee, Institute of Traffic Engineers, 60 John St., New York
Merwyn Kraft, Chairman, Karl A. Bevins, Jay A. Czizek, A. Wallace Gove, Ross C. Harper, Walter H. Klapproth, Theodore M. Matson, William R. McConchie, Henry W. Osborne, Earl J. Reeder, William J. Weller

Fitting Traffic Control to Wartime

JOSEPH B. EASTMAN, Director of the Office of Defense Transportation, in a statement addressed to state and municipal authorities, said: "The necessity for conserving vehicles, rubber and fuel, and the enormous expansion of war production in some areas, have created important changes in street traffic. Adjustments in traffic control methods have not kept pace with these conditions. This is wasting rubber, gasoline and time. In the national interest this waste cannot be permitted to continue."

Accordingly, the ODT has issued for the guidance of local and state authorities this 12-point statement of policy.

1. Unnecessary Traffic Signals

Where the needs of traffic do not justify their use, the operation of traffic signals should be immediately discontinued.

Two simple tests of need are based on traffic volume and pedestrian flow and are in accord with the Wartime Emergency Edition of the Manual on Uniform Traffic Control Devices for Streets and Highways.* Now, more than ever, the use of a traffic signal should depend on its continuing ability to meet at least one of these tests:

(a) an average of at least 1,000 vehicles per hour, of which at least 250 approach from the minor streets, enter an intersection for 8 hours in a normal day, or

(b) more than 300 pedestrians per hour cross a street which carries an average of at least 750 vehicles per hour for six hours daily.

These are the major tests of the need for signals. However, if a signal presently in operation meets any of the following four requirements, or very nearly satisfies a combination of any two, careful consideration should be given to continuing the signal in operation:

(a) a heavy left turning movement crosses through heavy opposing traffic at an intersection carrying an average of 1,000 vehicles hourly during 8 hours of an average day.

(b) Coordination with other signals is necessary to keep vehicles moving at uniform speed in compact groups.

(c) Traffic on a major thoroughfare is of such volume or speed that it must be interrupted to permit pedestrians or vehicles to cross safely without unreasonably long delays.

(d) The signals may be expected to reduce materially the number or seriousness of accidents that cannot reasonably be prevented by warning signs, safe-speed signs or stop signs.

2. Flashing Lights

A stop-and-go traffic signal which may be justified during the heavy traffic periods of the day need not be operated as a stop-and-go signal during light traffic hours. Such practices create wasteful delays which can be entirely eliminated if the signal is changed over to flashing operation.

When functioning as a flashing signal, the yellow should be shown in all directions, except when the signal is located on a through street or when the safe approach speed on one of the streets is below 8 miles per hour. In such cases, flashing red should show to traffic approaching on the minor street or the street with low safe approach speed.

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Signal cycles ranging in length from 35 to 50 seconds have been found fully adequate at the usual right-angle two-way intersection. Longer cycles create dissatisfaction, introduce unnecessary delay and discourage observance of the signals both by vehicle drivers and by pedestrians, more particularly the latter.

The exact conditions under which cycles in excess of 50 seconds may be required cannot be predetermined, and so each coordinated system now operating on longer than 50-second cycles should be carefully checked by competent traffic engineers to determine the shortest cycle length that may be practicable.

One further situation in which cycles longer than 50 seconds may be justified is that of a heavily-traveled main thoroughfare carrying large volumes of truck or bus traffic which must be expedited at the expense of a few vehicles on minor intersecting streets.

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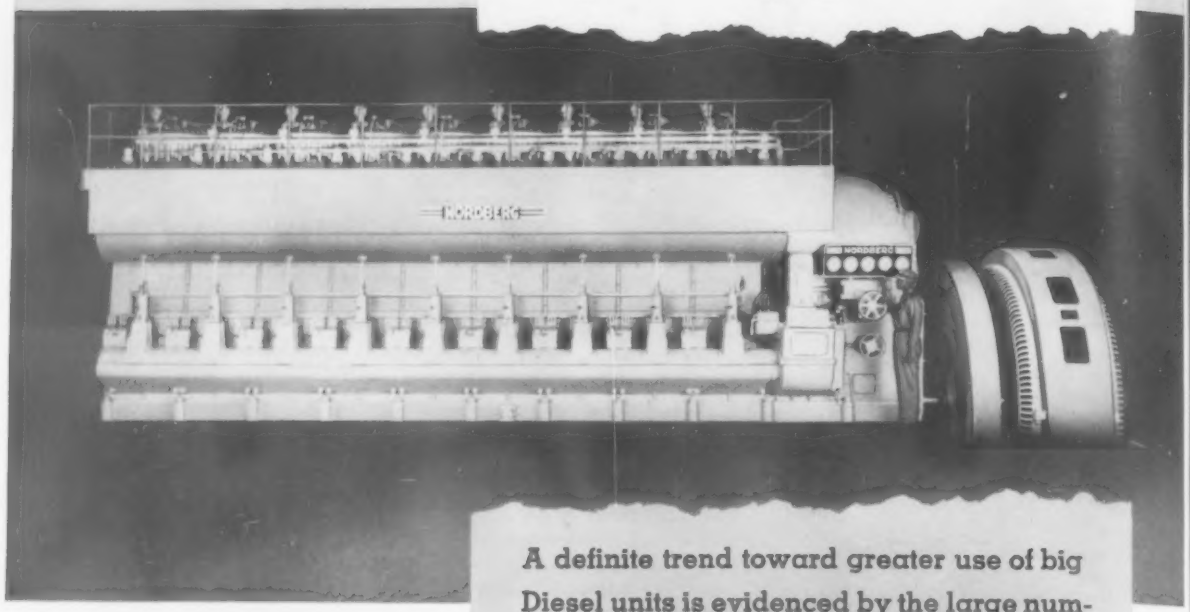
DIESEL POWER
for large capacity plants



This 3600 horsepower Nordberg Diesel engine is typical of the many of this size built for several large government plants and which supply power vital to our war effort.

A definite trend toward greater use of big Diesel units is evidenced by the large number of 3600 horsepower Nordberg Diesels recently installed. Some burn oil; some burn natural gas. In a single plant there is a total of 65,000 horsepower in Nordberg Diesel engines. This is the world's largest Diesel-engined power plant.

Back of these Nordberg Diesels is the experience of more than a quarter century in the building of engines of the larger powers. . . . This experience is available wherever Diesels of greater capacity are the best solution of the power problem.

NORDBERG MFG. CO., MILWAUKEE

NORDBERG
DIESEL ENGINES

of the ordinary timing requirements.

5. Timing Variations

While fixed-time traffic signals cannot be adjusted to provide the correct cycle or cycle division at each minute of the day, it is feasible to make a limited number of changes, as for example, to set up timing sequences for morning and afternoon rush hours and a third sequence for the remainder of the time during which the signal is operating.

This can be done by time clocks which already may be in the signal controller or which may be added. Where such equipment is not available and cannot be obtained, traffic officers may be instructed to make the necessary changes at pre-determined times.

6. Progressive Signals

Isolated fixed-time signals within one-quarter mile of one another should be coordinated wherever possible. Progressive operation of signals provides for nearly continuous movement of all vehicles on a thoroughfare at a predetermined speed and is by far the most efficient method of operation.

Much of the inconvenience and delay resulting from independent operation of adjacent signal installations can be eliminated by carefully planned coordination. Ordinarily this is done by the use of a master controller connected to a series of signalized intersections.

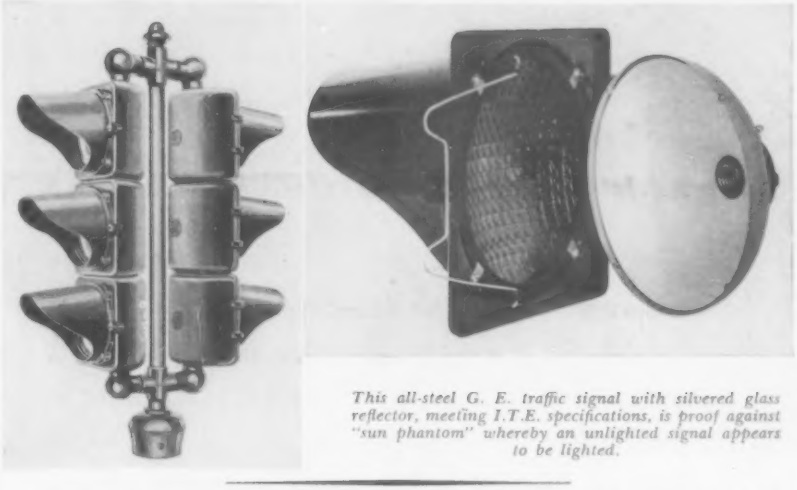
7. Traffic Officers

Many intersections on routes leading to war production centers, where there has been no previous need for police officer control, under present conditions may require police supervision.

It is not ordinarily desirable to assign traffic police to signalized intersections. This should be done only for limited periods or under special conditions as for example where large numbers of pedestrians or turning vehicles require assistance which automatic traffic signals alone cannot provide.

8. Police Control of Traffic Movements

Traffic officers should be trained in efficient methods to keep traffic moving. A war emergency training manual for traffic police is available from the International Association of Chiefs of Police, 1827 Orrington Avenue, Evanston, Illinois. Copies may be obtained upon request of any police department.



This all-steel G. E. traffic signal with silvered glass reflector, meeting I.T.E. specifications, is proof against "sun phantom" whereby an unlighted signal appears to be lighted.

Except in emergencies, a traffic officer should not attempt to take over the entire control of traffic at an intersection when automatic signals are in operation, as confusion and possibly accidents may result.

Traffic officers may appropriately be stationed at intersections where traffic volume varies greatly during the day and it is impossible to provide flexible, automatic adjustment of signal timing.

9. Unnecessary Stop Signs

Stop signs should be removed from all locations where they cannot be justified for the safe and orderly control of traffic.

Need for stop signs exists mainly at intersections where visibility is so restricted by buildings or other fixed obstructions as to reduce the safe approach speed below 8 miles per hour.

Under no circumstances should a stop sign be removed from any location where a stop is required by law, as for example at railroad crossings, drawbridges, or at the intersections of a legally designated through street or highway.

At many places where stop signs have been installed, cautionary warning signs will now be found fully adequate, while at many other locations any sign is unnecessary.

Under no circumstances should stop signs be used in conjunction with automatic signals.

10. Regulations

Traffic regulations of the three types most frequently warranting revision are those governing turning restrictions, "through" streets, and parking.

Restriction of turns, particularly left turns, will often facilitate the flow of traffic through an intersection. This should be done, however, only where certain turns cause unreasonable delay to vehicles or pedestrians or are particularly hazardous, and only where vehicles can accomplish an equivalent turn elsewhere with a minimum of added travel distance. Traffic volumes have fallen so greatly in many places that turning restrictions once needed to relieve traffic congestion can now be eliminated with consequent saving in vehicle mileage, gasoline, and rubber. In other areas, such restrictions may now be urgently required.

A through street or highway is established to accommodate "express" traffic between different sections or communities. Vehicles on intersecting streets or highways are legally required to stop before entering or crossing such a through street when stop signs have been erected. The through traffic during the major part of the day should be heavy enough to justify such delay of vehicles on the less favored intersecting roadways. An urban through street should be wide enough for at least two lanes of traffic moving in one direction or four lanes moving in two directions. It should have a continuous length of at least eight city blocks, except for a short connecting street that can be considered as part of a through-street system.

The need for new parking restrictions is particularly prevalent in the vicinity of war plants where greatly increased employment has created new traffic problems.

11. War Routes

War transportation routes should be laid out in all municipalities or local areas in which the concentration of industrial or military activity dictates improvement in the flow of traffic. Officials of any industrial or military establishments that may be involved should be consulted to obtain all pos-

"SPEAKING OF BATTING AVERAGES, DON'T FORGET MATHEWS HYDRANTS"

For dependability "under fire," for strength that resists breakage, for ease of repair, for maintenance-economy and winter-resistance, Mathews Hydrants have led the league through 70 long years. No one has ever improved on the Mathews principle of a removable barrel which contains all operating parts, which slips through a loose protection case and screws tight into the elbow. Only Mathews Hydrants are frost-proof and instantly replaceable with no break-points or weak spots. Hundreds of communities are Mathews rooters.

MATHEWS HYDRANTS

400 CHESTNUT STREET, PHILADELPHIA, PA.

ESTABLISHED IN 1803

Made by R.D. WOOD Company

MANUFACTURERS OF SAND SPUN PIPE (CENTRIFUGALLY CAST IN SAND MOLDS) AND R. D. WOOD GATE VALVES

sible information on their needs in connection with the movement of personnel and goods at plants.

The location of the plant or plants, and the areas between which materials and workers must be moved, should be spotted on a map. The more detailed the information as to where the workers live, the better.

Once the best routes are selected, their locations and advantages must be widely publicized, so that they will attract the desired traffic. Placing of route markers may be desirable, or it may be necessary to distribute maps to employees at the plants and to truck operators in the area. Above all, the routes should be so maintained that traffic will flow smoothly.

If the war transportation routes have been intelligently laid out and it is known that they actually give preference to war workers and commercial traffic, little difficulty will be had in getting drivers to use them.

12. Equipment

Every effort should be exerted to use most effectively the equipment already on hand before soliciting help of government agencies in the purchase of new equipment. For the manufacture of signs, wood can be as effective as metal. Only if there is no chance of obtaining a traffic signal locally should an application for a preference rating be made to the War Production Board. Such an application requires a full and detailed statement of the conditions that make the installation necessary.

Siren Chasers

FIORELLO LA GUARDIA, Mayor of New York City, has a fascination which is shared by a great many Americans—a fascination for fires and fire engines. Many people also enjoy following police cars and other emergency vehicles, says the Los Angeles Police Department, advising all drivers of the municipal law which states, "no driver of a vehicle shall follow any fire apparatus answering a fire alarm, or any other emergency vehicle answering an emergency call, closer than one block, or park any vehicle within the block where such fire apparatus, or other emergency vehicle, has stopped."

Staggered Hours

The public begins to see that it must choose staggered hours or ride rationing. I should be glad to send any city official gratis our new "slide rule" which shows graphically how a city-wide plan brings results.—L. T. Carter, General Electric Company, 570 Lexington Ave., New York.

A special control switch in base of controller cabinet allows easy dim-out of traffic signals during a blackout and switch back to normal for regular operation.

Seattle's Transit System Reports

By JOHN A. BEELER
The Beeler Organization
New York, N. Y.

FOR almost 20 years, from 1919 to 1938, the Seattle Municipal Street Railway had operated its system of street railway and cable lines over Seattle's rugged hills with varying financial results—usually at a loss. Gross revenues dropped from a high of $6,300,000 in 1921 to a low of $4,000,000 in 1935. In 1938 the accumulated annual deficits exceeded $6,000,000.

Former Mayor Langlie engaged my organization to prepare a plan for complete modernization. After acceptance by the city, the RFC granted the municipality a 15-year loan of $10,700,000 at 4 per cent. The plan provided for a partial rerouting and the purchase of some 235 trackless trolley coaches and more than 100 gas and diesel motor coaches. Some $4,500,000 of the loan was used to liquidate the former top-heavy indebtedness.

The faster and more attractive modern vehicles met with instant public approval. What has been accomplished financially under the new plan is set forth briefly in the table, which compares the last full year of operation under the old method, with the first full year under the new plan. This complete change-over was made just in the nick of time to care for the increased traffic demands thrust upon the System.

During the transition period the gross revenues increased some 82 per cent. The operating ratio, including taxes, declined from 92.9 to 64.4 per cent. Thus, the amount available from each dollar of revenue for depreciation and interest has increased from 7 to 35 cents. After providing for depreciation, but before interest, a deficit of some 9 cents existed under the old method; whereas, last year under the new plan, a balance of 25 cents, totaling some $2,000,000, was available. This was sufficient to pay the 1942 interest charges on the modernized system more than four times over.

In fact, the results have been so good the city has been able to reduce the 4½ per cent RFC loan by $1,700,000, and refinance the remaining $9,000,000 at 3½ per cent, thus making possible a further important saving.

	1938		1942	
REVENUES AND EXPENSES	Amount	% of Revenue	Amount	% of Revenue
Gross Revenues	$4,387,945	100.00%	$7,984,214	100.00%
Operating Expenses	4,004,115	91.25	5,036,765	63.09
Taxes	72,147	1.64	106,852	1.34
Depreciation	702,527	16.01	840,215	10.52
Total	$4,778,789	108.90%	$5,983,832	74.94%
Balance Available for Interest	$ 390,844	8.90%	$2,000,382	25.06%

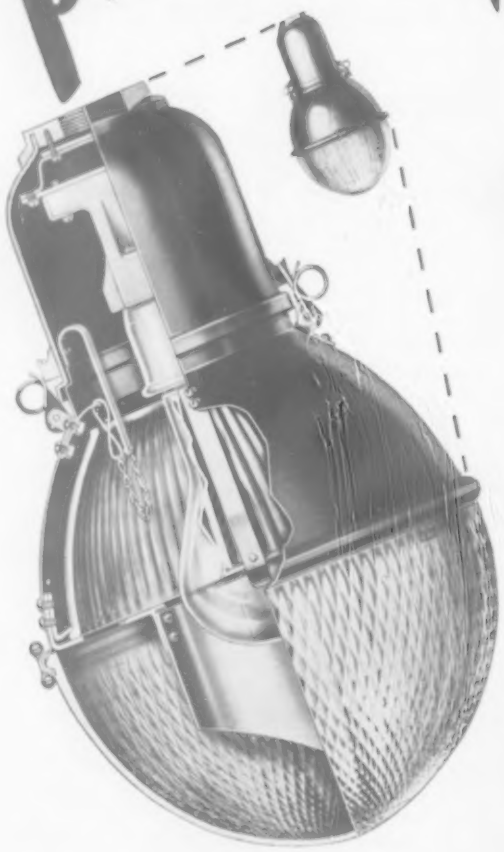
* Includes Amortization of Intangibles of $223,000.

for every outdoor lighting job

. . . you're ALL WAYS right with

prismalite

Whether you are lighting to protect a war plant or to increase safety and visibility on a street or highway, you'll find the L-M Prismalite *all ways* the right luminaire . . . for all outdoor overhead lighting.



RIGHT IN PERFORMANCE

For light reflection the Prismalite is the only outdoor luminaire using the glass prism—the most exact means known to science for controlling the direction of light. From a concealed light source the Prismalite distributes the light over a wide area . . . produces maximum visibility, minimum glare.

RIGHT IN PERMANENCE

The Prismalite retains its original high lighting efficiency for life. Its glass prism reflecting surface is utterly free from the mechanical and thermal deterioration which gradually decrease the efficiency of other types of reflectors.

RIGHT IN ADAPTABILITY

You can easily adapt the Prismalite to many different installations. A clear glass globe is easily interchangeable with three types of assymetric refractors which re-direct the light from a luminaire to a certain desired area. A variety of interchangeable hoods and brackets are available for every mounting requirement.

RIGHT IN LOW MAINTENANCE

The Prismalite is furnished with several types of glassware holders all of which effectively seal out moisture and dirt, yet permit replacing of glassware in the field. The glass prism reflector is well protected by the steel outer housing, yet can be easily removed and placed in a new housing. And you can safely clean the Prismalite reflector with Go-Corro, or a similar cleanser.

RIGHT FOR VICTORY, TOO!

The L-M Prismalite Luminaire with its clear glass prism reflector ties up no copper or other critical material needed for Victory. Remember, too, that you replace Prismalite glassware in the field. No need to maintain a reserve stock of luminaires to replace those which must be factory repaired.

Get full information from your L-M Field Engineer or nearest L-M Office, or write to Line Material Co., 802 N. 8th St., Milwaukee, Wis., for your copy of the L-M Prismalite Bulletin.

LINE MATERIAL COMPANY

Outdoor Lighting

Streets—Highways—Floodlighting

The Automobiles Are Coming

AT one time in America's automotive history, the reconstruction of streets, the construction of new roads, and the hard paving of existing roadways were of far greater importance than the regulation of the traffic upon the country's streets and highways.

During the last ten years, however, the problems of parking, speed, and congestion captured the spotlight. In this period traffic fatalities rose from 29,000 to a maximum of 40,000 in a year. Traffic authorities—state, municipal, private and quasi-private—became justifiably exercised over the continued slaughter which stemmed directly from the following: (1) the increase in vehicle registrations from 25,832,884 in 1931 to 34,383,167 in 1941; and (2) the lack of effective measures taken. In addition to the traffic deaths, injuries, and property damage, there was mounting discomfort due to congestion on the roadways and lack of parking facilities.

PHOTOGRAPH COURTESY OF WESTINGHOUSE ELECTRIC & MFG. CO.

Plan post-war street lighting now.

Curb Parking Solved

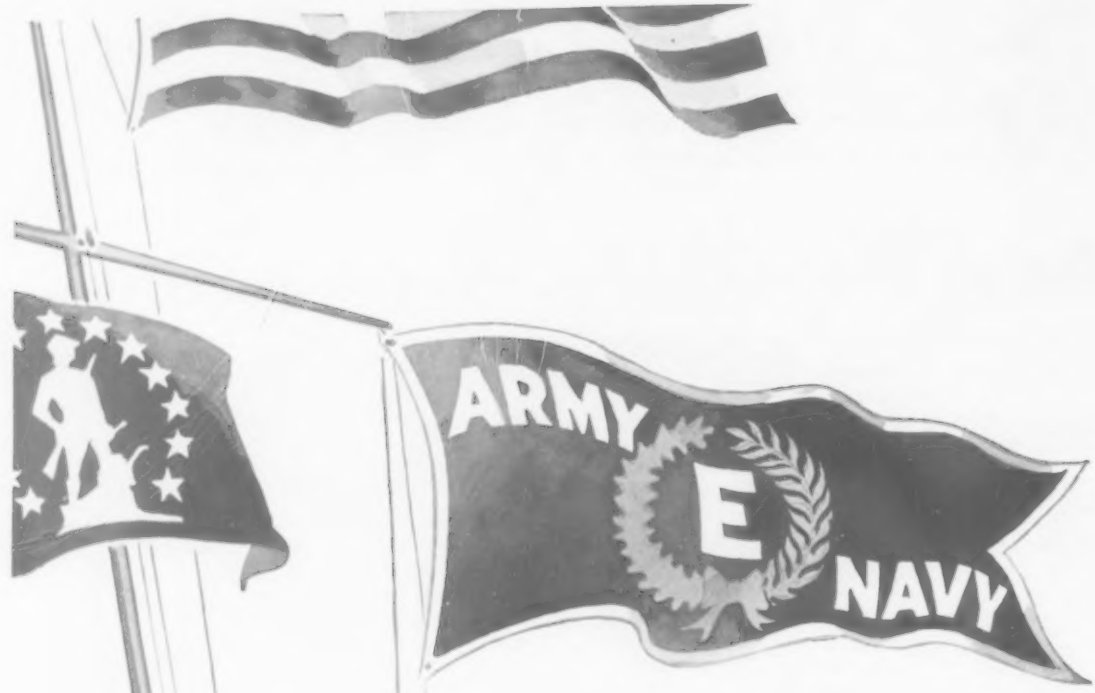
The first definite scientific relief was achieved at the curb. Up to 1935-37, it was practically acknowledged that there was no visible solution to the parking problem except parking lots, garages, and prohibition of street parking. Then the parking meter was invented and installed in Oklahoma City. It eliminated the all-day parker, stopped bumper-to-bumper parking, and provided spaces at the curb for those having business there. It also brought a storm of indignation, protest, and emotional incoherence, which, despite subsequent satisfactory results in 443 cities, has not yet abated. Throughout this pioneering period of six years, THE AMERICAN CITY and THE MUNICIPAL INDEX, alone of all national publications in the United States, consistently supported the parking meter as the way to control and retain curb parking as a public convenience. The parking-meter war has been won. When the Global War is also won, cities are expecting to install parking meters as a matter of course.

No single event or device has had a major influence in facilitating, and at the same time adding to, the safety and comfort of flowing traffic. Many minds, many nostrums, mounting illness. Now in the comparative lull, except in expanded war-industry cities, stock is being taken of the relative values of these prescriptions. A short-sighted view of traffic signals led too generally to the purchase and installation of the cheapest. By far the larger proportion of them were, and are, fixed-time stop and go lights. The reduction in passenger cars and the increase in war and mass-transportation traffic, revealed that many of these signals should be removed. Their rigid timing could not be made to fit any two intersecting streets. It is to be hoped that they will be reinstalled only where they will help. Now is the time to study and work out definite plans for progressive signal systems and vehicle-actuated signals. The traffic signal manufacturers can give sound advice on what will be available, where each type should be considered, and why the results should be the best obtainable.

Traffic signs have been a heterogeneous lot, partly because many of them were installed as a precaution and a hope rather than as a backed-up warning and directive; partly because little advancement has been made in years in sign materials. During the war, certain new and newly appreciated materials and methods have been tested. Much more effective reflectorization is now being attained. Luminous materials of practical quality have been produced and will be increasingly used to make signs and pavement and curb markings effective at night as well as by day. Dimout, brownout, and blackout, have called attention to the necessity for using a visible sign, signal, marker, reflector, delineator, and legend.

They Happen Mostly at Night

As more than half of the fatal traffic accidents occur at night (64.6 per cent in New York State in 1942) when traffic volume is lightest, street and highway officials have long known that greatest reductions could be made in



A New Flag Flies Over Union Metal Today

THERE'S a fresh look of determination in the eyes of the men and women of Union Metal today—a look that is accompanied by a greater hum of activity than we have ever heard around here before. For, outside our plant, flying high for all to see, is the coveted Army-Navy E Pennant.

That new flag has done something to all of us—something we can't quite explain, but which certainly augurs no good for America's enemies. And, from here on in, we pledge to do our best to *continue* to merit this great honor which the armed forces have conferred upon us, and to give to them the fullest support, both moral and material, of which we are capable.

Special War Products—Cargo Booms and Masts, Practice Bombs, Recoil Mechanisms, Gun Mounts.

Regular Products—Steel Street Lighting Standards, Monotube Steel Pile Casings, Steel Skids and Boxes, Monotube Steel Poles for distribution and transmission lines.

UNION METAL

THE UNION METAL MANUFACTURING COMPANY
CANTON, OHIO
Craftsmen in Steel Fabrication

the traffic toll by removing the principal cause of night accidents—insufficient visibility. Obviously neither drivers nor pedestrians can see as well in dimness, darkness, or in the glares of headlights as in daylight. During the last few years, electrical manufacturers designed and produced traffic-safety-lighting luminaires, lamps, standards and brackets, and clearly set forth the procedure for their selection and installation. A number of cities have already put in complete, or at least large-scale, modern installations. The definite decrease in accidents which follows such an installation has been measured and is known in hundreds of locations. Present dimouts and other lighting curtailments are proving statistically that decreasing street visibility increases traffic accidents. Many cities are now giving practical thought to their street-lighting systems. Scores of them have informed THE MUNICIPAL INDEX that they want more facts about street-lighting equipment for study, planning, decision and action. They are interested in improving conditions *now* in places where congestion and accidents have shown no abatement. They are interested in making their streets safer and more attractive after the war.

The Automobiles Are Coming

There will be too many factors in the post-war equation of motor-vehicle registrations to even hazard a guess. It is no secret, however, that the new models will produce awe, yearning, and a determination to own. The first offering to follow the war's close is expected to be the 1942 model—as the tools, dies, and labor are ready to go into production in six months. The subsequent model will have changes, but still be based on "1942." The third year, however, will see greater use of aluminum and magnesium for lighter weight; and plastics for interior trim and even for some bodies where the plastic can stand bolting to frame and door-slamming. These cars will give greater mileage per gallon and per tire. They will have automatic chain transmission or fluid drive, tending toward operation by buttons, as simple as manipulating a radio. They will furnish speed with a smaller motor, have faster acceleration, and better braking. In a word, they will be desirable.

The war is resulting in the accumulation of many automotive improvements which will appear in trucks and coaches as well as in automobiles. Millions of these new vehicles, mixed with millions of jallopies, will constitute post-war traffic.

Sodium vapor lights New York's Belt Parkway connecting busy beaches and boroughs.

Modern Traffic Measures Imperative

This modern traffic represents the projectiles. The traffic devices, regulations, enforcement, and point of view represent the armor plate. Obviously, the armor plate must keep pace with the improvement and agility of the projectiles. The job of the manufacturers is to produce the right safety and control equipment and to assist the public authorities in understanding, accepting, and making thorough use of it. The job of the public authorities is to get busy doing all the studying and applying that local needs demand. This point of view will produce plans and systems which will make the new cars welcomed instead of dreaded. Correlated information on what to do and how to do it, is the immediate need in this wartime breathing space. Every city should have a Traffic Project covering street surface, markings, signs, signals, parking, transit and street lighting. Having the physical control system, it will be possible to regulate in accordance with its efficacy. This article is published in the Outdoor Lighting Section to emphasize the fact that the Traffic Plan must work by night when 60 per cent of the fatal accidents occur, as well as by day for the 40 per cent.

Street Lighting During Blackouts

THE War Department standards, condensed below, may be imposed by military authority during specified periods and in specified areas. Independent of such action, these standards afford guides to civilian authorities as to measures that can be taken by them to align their course of action with that which may eventually be prescribed.

Due to the scarcity of certain critical materials involved in the manufacture of the equipment called for in these specifications, it is probable that only the most exposed communities in the continental United States will be able to procure the equipment. For this reason these specifications are being given only a limited distribution at this time.

(a) This specification has been prepared on the premise that normal street lighting will prevail except when and where blackouts are ordered by proper military authority. *Any curtailment of present street illumination at other times is not recommended. Reduction in voltage, lamp size, or number of street lamps results in added traffic hazard without any significant decrease in ease of detection and identification from the air.*

(b) Within areas designated by proper military authority, local officials responsible for street lighting should make the following arrangements in preparation for blackouts:

(1) Provide switching facilities and assign personnel to insure that the present street lighting system will be turned off quickly—in not more than five minutes—after the official blackout signal has been given.

(2) In consultation with responsible local military authority, make a survey to determine locations where an auxiliary blackout lighting system may be desirable in the event blackouts be-

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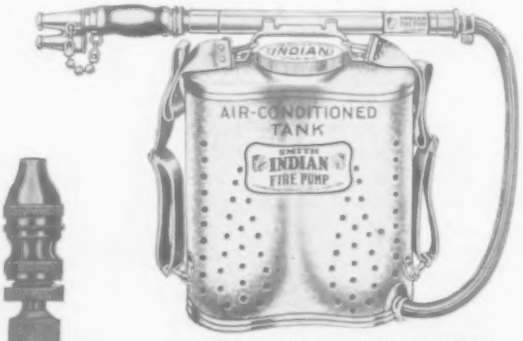
Fire Pumps

WILL DO IT!

Soldiers use **INDIAN FIRE PUMPS** to put out a forest fire near their camp. The Army finds **INDIANS** highly valuable for extinguishing fires in mess halls, supply depots, fires on artillery and rifle ranges, etc. Stream drives to base of flame—killing it instantly, completely.

America's shrine of freedom, the sacred Liberty Bell, is guarded by attendants with **INDIAN FIRE PUMPS.** Independence Hall is protected against enemy action and fire hazards. **INDIANS** provide a quick means of stopping fires before they spread.

Wartime fire-fighting equipment should include an ample supply of INDIAN FIRE PUMPS—the portable, clear water extinguishers which have the enthusiastic endorsement of fire chiefs, Civilian Defense and municipal fire-fighting authorities. City officials are urged to get full details on these world-famous fire fighters. ***Send for catalog.***



Adjustable Nozzle
Slight turn adjusts from straight stream to a spray. Makes the INDIAN adaptable to any type of fire.

USES ONLY CLEAR WATER
Large, rust-proof tank holds 5 gals. of water. Pump throws 30 to 50-ft. stream. Outfit is carried by handle or slung on the back, thus enabling operator to get about rapidly without having to stop and pick up the extinguisher.

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D. B. SMITH & CO., 421 MAIN ST., UTICA, N. Y.

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come frequent or of long duration. In general, such locations will be those where substantial pedestrian movement is expected during blackouts—business and office districts, shopping centers, roads and walks leading to war plants, important crosswalks on heavily traveled thoroughfares, etc. This survey should provide the following information:

(a) Listing of locations in order of their importance.

(b) Detailed plan for placing and mounting each blackout lighting unit.

(c) Most convenient source of power for each unit and amount of new wiring and other equipment needed.

(d) Inventory of wire (iron wire is satisfactory for this purpose) brackets, and other necessary supplies which are already on hand.

(e) Statement of additional equipment and material required.

(3) Whenever blackouts become frequent or of long duration, install blackout lighting in accordance with this specification to the extent justified by local conditions.

Purpose of Blackout Street Lighting

Complete elimination of all artificial light constitutes the most effective possible blackout. However, a total blackout seriously handicaps the activities of personnel engaged in air raid duties—wardens, doctors, nurses, firemen, police, and military personnel—at the very time when it is of vital importance that they be able to move about and perform their services efficiently. It is the purpose of blackout street lighting to provide the greatest possible illumination for ground activities commensurate with reasonable protection from aerial observation.

Blackout street lighting, although a very valuable aid to vehicular and pedestrian movement during blackouts, obviously provides such low visibility that anything approaching normal movement is impossible. Resort to blackout street illumination, therefore, except when a raid is imminent, results in serious losses. One of these losses is the inevitable increase in traffic fatalities, personal injuries, and property destruction. There is also the slowing down of war activities caused by sharply reduced speed of transportation of essential personnel, military equipment, and critical materials. Another loss is depressed civilian morale and lowered efficiency. *Except during periods when a raid is imminent, efficient functioning of the whole war effort requires that normal street lighting be maintained in common with other means for safeguarding and facilitating traffic.*

Allowable Illumination

The illumination over the street on a horizontal surface at street level shall average approximately 0.0003 footcandles, and shall nowhere exceed 0.0006 footcandles. This amount of illumination is approximately double that provided by starlight on a clear, moonless night. The light shall be "white." Extensive studies have shown that "blue" light is not suitable for blackout street illumination.

A special design of blackout street lighting luminaire is required to meet this specification. Incandescent lamps employed in these luminaires shall be 10-watt inside frosted lamps designed for this service. Manufacturers before obtaining official approval, must submit their blackout equipment to the Electrical Testing Laboratories, New York City, which is accredited for this testing work by the War Department.

The correct light distributions are associated with nominal mounting heights of 10, 15, and 20 feet as marked on the luminaires. The spacing of the luminaires must be more than 100 feet and preferably not less than 150 feet.

Black Out Enemy, Not Yourself

LIGHTING specialists have learned that when the air raid sirens sound, it is neither necessary nor desirable to sit in the dark in an atmosphere of nervous tension. The idea is to blackout the enemy not ourselves. We have learned that it is quite possible to have a complete exterior blackout without sacrificing adequate interior illumination in home or factory.

In case of air raids or blackouts in an industrial area, people should be prepared to work without interruption. The average citizen should, but does not, know how to maintain healthful conditions in his home and how to avoid accidents during a blackout. Nobody has ever sold him on it. As for industrial protection, present-day architecture provides windowless construction, shatterproof glass, minimum of skylights, neutral exterior coloring, and light interior painting. In plants not so equipped, it is possible to have such protection by using modern lighting and safety devices. The blackouts must be effective without costing accidents.

Phosphorescent coatings glow in the dark without light being shined upon them, while fluorescent materials glow when irradiated by ultraviolet light which itself is invisible.

Luminous markers and signs will denote exits, doors and factory aisles. Phosphorescent coatings outline door knobs, switches, stairs, railings, paths to air raid shelters. Early in this war, thousands of persons in Great Britain were injured because of blackout accidents in the homes and streets. We want to prevent that from happening here as much as possible—whether or not bombs fall.

SAMUEL G. HIBBEN,
Director of Applied Lighting, Westinghouse Lamp Division, Bloomfield, N. J.

Carry a Newspaper at Night

WEAR something white at night! This urgent request has been made of pedestrians all over the country, so that the mounting toll of pedestrian deaths, especially in dimout areas, can be halted. Male pedestrians, for the most part, wear dark clothing. To make themselves visible at night, the Traffic Education Unit of the Los Angeles Police Department suggests that they carry a folded newspaper in plain sight when walking across darkened streets. And for war workers who carry lunchpails—paint them white for greater reflection.

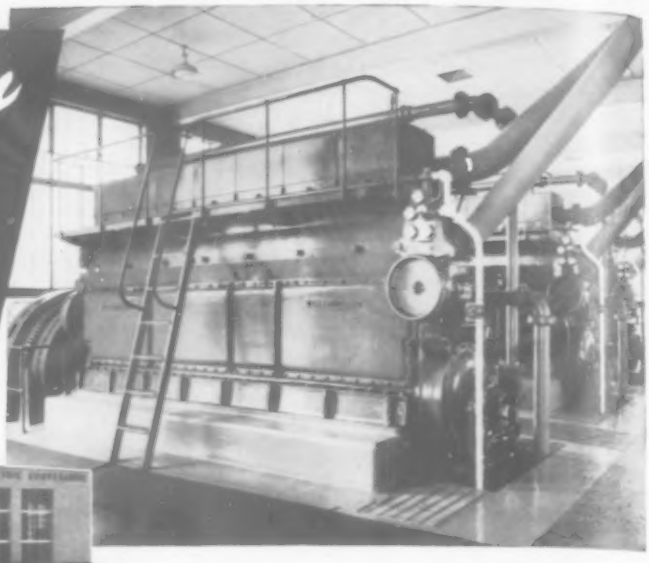
Because of reduced street lighting necessitated by the war crisis on the Pacific Coast and the presence of many inexperienced walkers forced from their cars by gasoline rationing, pedestrians face greater peril on Los Angeles streets today than in the pre-war era.

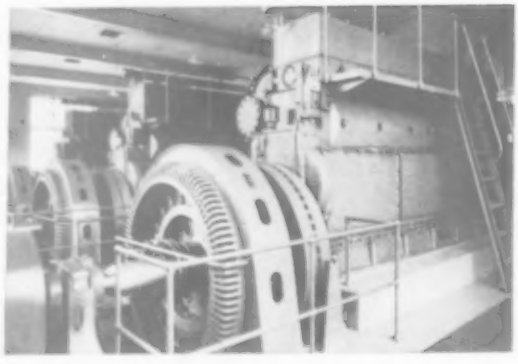
Pedestrian Chief Victim

Police records for the first part of 1943 ending February 16 reveal a 22.5 per cent increase in pedestrian injuries over the same period in 1942. Pedestrian fatalities have shown only a 10.8 per cent decline as compared with a 21.3 per cent reduction for other traffic deaths.

Traffic injuries to pedestrians are more likely to be fatal than to victims of other types of accidents. One pedestrian dies for 17 who receive non-fatal injuries. In other Los Angeles traffic accidents the ratio is 62-1. The hazardous actions of pedestrians, responsible for the majority of traffic accidents, include: crossing streets in midblock, walking against traffic signals, failure to use pedestrian tunnels and crosswalks, and crossing roadways at points where there are no street lights.

Here's a Pattern FOR COMMUNITY POWER





DIESEL ENGINES 150 to 1500 hp.

GAS ENGINES 175 to 2880 hp.

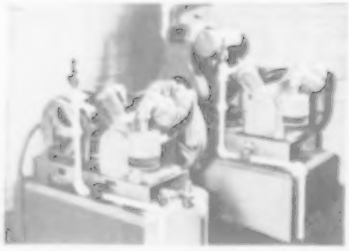
CONVERTIBLE GAS-DIESEL ENGINES 150 to 1500 hp.

TO ALL YOUR WORTHINGTON PLANTS

An interesting example of rural community power planning, in cooperation with the Rural Electrification Administration, is the recently completed plant of the Western Michigan Electric Cooperative.

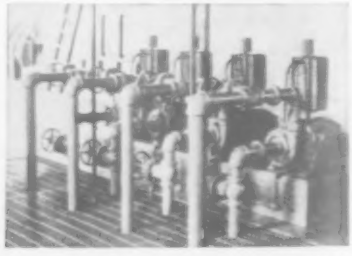
Here three Worthington 595-horsepower fully-enclosed diesel engines, driving synchronous generators, furnish economical power to nearly 1200 consumer-members on 340 miles of line. With its integrated Worthington auxiliary equipment as an assurance of uninterrupted operation, this station is regarded as a model of completeness and advanced methods. Now doing its part in providing power for war services, it stands ready to meet the expanded post-war needs of a forward-looking community. No section of the country is too remote for this kind of modernization.

Air compressors for starting



Rotary pumps for fuel oil transfer

Centrifugal pumps for jacket water circulation



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WORTHINGTON

WORTHINGTON PUMP AND MACHINERY CORPORATION • HARRISON, NEW JERSEY

Municipal Law Notes and Decisions

Prepared by National Institute of Municipal Law Officers, Washington, D. C.
Charles S. Rhyne, Executive Director

Model Ordinances on Victory Gardens

Thefts from Victory Gardens and the Use of City Property for Victory Gardens Are the Subjects of These Model Ordinances Drafted by the National Institute of Municipal Law Officers

An Ordinance Providing Penalties for Damaging, Trespassing upon or Stealing from "Victory Gardens," or Any Other Vegetable Garden or Orchard, Repealing Ordinances in Conflict Therewith and Declaring an Emergency.

Whereas, An emergency exists by reason of wartime conditions now prevailing which have diminished the national and local food supplies; and

Whereas, As a part of the War Program, the development, cultivation, and maintenance of "Victory Gardens," or any other vegetable garden or orchard is being encouraged and fostered as a means of increasing the national and local food supply; and

Whereas, The efficient operation, maintenance, and use of "Victory Gardens," or any other vegetable garden or orchard located in the City of ———— will be impeded by unauthorized acts of persons who steal from, damage, or trespass upon aforesaid gardens or orchards; now therefore,

Be it ordained by the Council of the City of ————.

Section 1. Trespassing upon Garden Property or Orchards. It shall be unlawful for any person to enter any enclosed or unenclosed "Victory Garden," or any other vegetable garden or orchard located within the City of ———— without the consent of the owner, or tenant, or his or her agent, and there cut down, injure, damage, destroy, eat or carry away any portion of said garden, including any growing thing, crop, tree, timber, grass, seed, soil, fertilizer, water supply, tool, implement, fence, or any other protective device or any other thing useful for the development, cultivation, maintenance and use of the aforesaid gardens or orchards.

Section 2. Repeal of Conflicting Ordinances. All existing ordinances of the City of ———— are hereby repealed insofar as they may be inconsistent with the provisions of this Ordinance.

Section 3. Separability of Provisions. It is the intention of the City Council that each separate provision of this Ordinance shall be deemed independent of all other provisions herein, and it is further the intention of the City Council that if any provision of this Ordinance be declared invalid, all other provisions thereof shall remain valid and enforceable.

Section 4. Finding of Emergency. This ordinance is passed as an emergency measure, and the Council does by the vote by which this ordinance is passed, hereby declare that an emergency exists, which makes it imperative that this ordinance shall become effective forthwith, the nature of said emergency being as follows: Wartime conditions have created not only a national but a local shortage of food for the residents of the City of ————, so that it is necessary to protect the public health and promote the general welfare by encouraging and protecting the raising of vegetables and fruits by making this ordinance effective immediately.

Section 5. Penalty for Violations. Any person violating the provisions of this ordinance shall upon conviction thereof be fined not less than ————, nor more than ———— for each offense.

Adopted this —— day of ————, 194—.

An Ordinance Providing for the Issuance of Permits to Residents of the City of ———— for the Use of Property Owned by the City of ————for "Victory Garden" Purposes, Repealing Ordinances in Conflict therewith and Declaring an Emergency.

Whereas, An emergency exists by reason of wartime conditions now prevailing which have diminished the national and local food supplies; and

Whereas, As a part of the War Program, all land so far as practicable should be used for the cultivation, operation and maintenance of "Victory Gardens"; and

Whereas, The City of ————owns certain property useful for the cultivation, operation and maintenance of "Victory Gardens"; now therefore

Be it ordained by the Counsel of the City of ————.

Section I. Director of Public Works Authorized to Issue Permits. The Director of Public Works is hereby authorized and directed to issue permits to residents of the City of ———— for the use of vacant property owned by the City for the cultivation, operation and maintenance of "Victory Gardens."

Section II. Contents of Permit. The Director of Public Works shall issue permits in terms substantially as follows:

This Permit is granted this —— day of ————, 194—, by the City of ————, hereinafter referred to as the City, acting by and through its Director of Public Works, hereinafter referred to as the Director, to ———— residing at ————, in the City of ————, hereinafter referred to as the Licensee. The Licensee in consideration of the privilege of entering upon, occupying and using the property owned by the City situated ————, known as "Victory Garden" Plot ————, hereby agrees and covenants as follows:

1. That said property will be used exclusively for the purpose of raising vegetables, fruits or produce.

2. That said property will be cultivated, within seven days from the date of this application, and will thereafter be kept in a state of continuous cultivation and free of weeds or debris until the crops in the garden are harvested.

3. That the vegetables, fruits or produce grown in this "Victory Garden" shall be used for consumption by the Licensee or his family, and shall not be sold to other persons.

4. That whenever the Licensee is unable to cultivate this "Victory Garden" properly by keeping it free and clear of weeds or debris, the Licensee agrees to notify the Director, and this notice constitutes an abandonment by the Licensee of all rights in this "Victory Garden" including the growing crops.

5. That whenever the Licensee fails to cultivate, operate or maintain this "Victory Garden" properly, it shall be declared abandoned by the Director and the Licensee shall thereby lose all rights in this "Victory Garden" including the growing crops.

6. That whenever a garden is abandoned in the manner set out in paragraphs 4 and 5 the Licensee shall remove all his property exclusive of anything growing therein, and upon the Licensee's failure to remove his property the Director is authorized to have the property removed at the cost and expense of the Licensee and the garden area returned, at the cost and expense of the Licensee, to the state and condition in which it was delivered to the Licensee.

7. That no soil, structure, improvement or tree or other thing on the property at the date of this application, or subsequently placed thereon by the City, shall be removed, destroyed or mutilated, and that no structure shall be erected thereon without the express written consent of the Director.

8. That this permit shall not be transferred, and that the Licensee shall not rent or sublet all or any portion of the premises assigned to him.

9. That neither the City nor its agents shall be liable for any loss, damage, cost or other expenses incurred by the Licensee.

10. That this permit is not, and is not

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3812 Castellar St., Omaha, Neb. 576 Wall St., Winnipeg, Man., Canada

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Lots of 12
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intended to be a lease, grant or franchise and may be revoked by the City at any time without cause before its date of expiration as stated in paragraph 12.

11. That whenever such property is required by the City, the Licensee shall vacate the same within a period of ——— days after being notified by the Director and shall remove all his property, or the Director may remove the property of the Licensee at the Licensee's cost and expense.

12. That this permit expires at the end of the ——— season, at which time the Licensee shall deliver the property to the Director in a condition satisfactory to the Director, and upon the Licensee's failure to so deliver the property, the Director is authorized to put it in a condition satisfactory to him at the Licensee's cost and expense.

13. That the Licensee shall abide by all authorized rules and regulations made by the Director.

IN WITNESS WHEREOF, the City has caused its name to be subscribed hereunto by the Director, and the Licensee has affixed his signature hereunto as of the day and year written above.

SECTION III. RULES AND REGULATIONS. The Director of Public Works is hereby authorized to make such reasonable rules and regulations as may be necessary to execute and make effective the provisions of this Ordinance.

SECTION IV. REPEAL OF CONFLICTING ORDINANCES. All existing ordinances of the City of ——— are hereby repealed insofar as they may be inconsistent with the provisions of this Ordinance.

SECTION V. SEPARABILITY OF PROVISIONS. It is the intention of the City Council that each separate provision of this Ordinance shall be deemed independent of all other provisions herein, and it is further the intention of the City Council that if any provision of this Ordinance be declared invalid, all other provisions thereof shall remain valid and enforceable.

SECTION VI. FINDING OF EMERGENCY. This Ordinance is passed as an emergency measure, and the Council does by the vote by which this ordinance is passed, hereby declare that an emergency exists, which makes it imperative that this Ordinance shall become effective forthwith, the nature of said emergency being as follows: Wartime conditions have created not only a national but a local shortage of food for the residents of the City of ——— so that it is necessary to protect the public health and promote the general welfare by providing for the raising of vegetables, fruits and produce on city-owned property by making this Ordinance effective immediately.

SECTION VII. PENALTY FOR VIOLATIONS. Any person violating the provisions of this Ordinance shall upon conviction thereof be fined not less than ———, nor more than ——— for each offense.

Adopted this ——— day of ———, 194—.

Some Recent Court Decisions

Bankruptcy—Discrimination Among Bondholders in Composition Plan

In proceeding under Municipal Bankruptcy Act proposed plan of composition of Town's debts providing for retirement of bonds so that property owning bondholders would receive special benefits the plan was properly dismissed as unfairly discriminatory. *Town of Belleair, Fla.* v. *Groves et al.*, 132 *Fed.* 2d) 542 (U. S. C. C. A. 5th. Dec. 29, 1942).

Bonds—Money Held in Trust Not Subject to Attachment

Where money was collected by city and deposited in bank to be held in separate fund for certain bondholders plaintiff could not attach funds since money was appropriated for purpose inconsistent with his claim, *Murdock* v. *City of Asbury Park*, 48 Fed. Supp. 18 (U. S. D. C. N. Y. July 30, 1942. Just released for publication).

Boulevard—Sidewalks—Maintenance of Governmental Function

The City of Chicago is not liable for negligent maintenance of sidewalks on Ashland Boulevard because such maintenance is a governmental function. *Griffin* v. *City of Chicago*, 45 N. E. (2d) 890 (Ill. App. Jan. 6, 1943. Reh. Den. Jan. 20, 1943).

Busses—Restriction on Loading and Unloading

An ordinance prohibiting motor carriers from loading or unloading passengers on public thoroughfares to avoid congestion was not unreasonable, prohibitory, or discriminatory as applied to a bus company which used a drugstore for a depot. *Tennessee Coach Co. et al.* v. *Mayor, etc., of City of Lenoir*, 167 S. W. (2d) 335 (Tenn. Jan. 9, 1943).

Condemnation—Waterworks Company Has Right to Interfere—Village Does Not

The Waterworks Company had the right to intervene as "having interest in the subject matter" when condemnation of land by the United States would reduce its water supply, but the Village of Highland Falls did not as it would only repeat the intervention of the Waterworks Co. *United States* v. *Certain Lands in Town of Highlands, Orange Co., N. Y.*, 48 Fed. Supp. 303, 306 (2 cases) (U. S. D. C. N. Y. July 14, 1942. Just released for publication).

Eminent Domain—Rights of Terminal Company Occupying City Property

Where terminal company erected public freight terminal on city property, the terminal company was denied a right of compensation when the Federal government took the property by an exercise of its power of eminent domain since terminal company did not have a franchise from city. *United States* v. 55¼ *Acres of Land in Borough of Brooklyn*, 47 Fed. Supp. 887 (U. S. D. C. N. Y. Nov. 5, 1942. Just released for publication).

Navigable Waters—State May Delegate Its Authority to Village

State lawfully delegated its power to village of Deephaven when it authorized village council to enact ordinances establishing harbor and dock limits and regulating location, construction and use of all piers, docks, wharves and boat houses on navigable waters. *Nelson* v. *De Long*, 7 N. W. (2d) 342 (Minn. Dec. 18, 1942).

Parking Space—Not a "Parking Lot" or "Garage" When Used for Restaurant Business — Traffic Ordinance Distinguished from Zoning Ordinance

New Orleans ordinance prohibiting driveways across sidewalks at certain places is not a zoning ordinance but a traffic ordinance and maintenance of driveway by restaurant within forbidden area for access to parking space is not ground for having restaurant business declared a nuisance, nor is parking space a "parking lot" or "garage" within zoning ordinance defining garage as lot used for temporary storing, parking or caring for self-propelled vehicles or trailers. *State ex rel. Szodomka* v. *Gruber*, 10 So. (2d) 899 (La. Nov. 4, 1942. Reh. Den. Nov. 30, 1942).

Sewers—Connection Permits—Void Use Of

A village cannot prohibit issuance of sewer and water main connection permits on which sewer and water main assessments were uncollectable for failure to file notice of assessments where village is enjoined from taking proceedings to collect unpaid portion of assessments. *State ex rel. F. B. Co.* v. *Village of Beachwood et al.*, 46 N. E. (2d) 808 (Ohio App. Cuyahoga Co. June 22, 1942. Just released for publication).

Streets—Legally Closed—Liability for Defective Condition If Open as Public Street

Where city treats streets not legally opened as public streets, and regulates them, it is liable for injuries to infant pedestrian due to defective condition of streets. *Vastola et al.* v. *City of New York*, 45 N. E. (2d) 814 (N. Y. App. Dec. 3, 1942).

Tax—Occupation—Doing Business

Where village ordinance required every fire insurance company "doing business" in the village to pay an occupation tax, "doing business" meant doing some of the business that is ordinarily done by a corporation in carrying out the purpose for which it was created. *Village of Axtell* v. *Nebraska Hardware Mut. Ins. Co.*, 7 N. W. (2d) 471 (Neb. Jan. 6, 1943).

Taxation—Where State Appears of Record as Owners of Realty—Unrecorded Deed

In city's proceeding to foreclose right of redemption under tax title acquired by it for tax assessed on realty, court held that realty conveyed to corporation by unrecorded deed from state was not tax exempt as state property under statute providing that persons appearing of record as owners of realty shall be held true owners for tax purposes. *City of Boston* v. *Quincy Market Cold Storage & Warehouse Co.*, 45 N. E. (2d) 959 (Mass. Dec. 30, 1942).

Taxes—Recovery of Where Payment Made under Written Protest

For recovery of tax payments mistakenly made taxpayer is not limited to administrative remedies of laws of New York City since taxes erroneously paid under written protest can be recovered by an action for money had and received. *Title Guarantee & Trust Co.* v. *City of New York*, 38 N. Y. S. (2d) 715 (N. Y. Sup Ct. App. Div. Dec. 21, 1942).

Waters—Riparian Owners Have Rights Superior to Municipality

Riparian owner had right superior to municipality to divert water although lands were acquired subsequent to the Desert Land Act of 1877 since such act does not withhold riparian rights from conveyances of public lands in arid areas. *Williams et al.* v. *City and County of San Francisco*, 133 Pac. (2d) 70 (Cal. App. Dec. 28, 1942).

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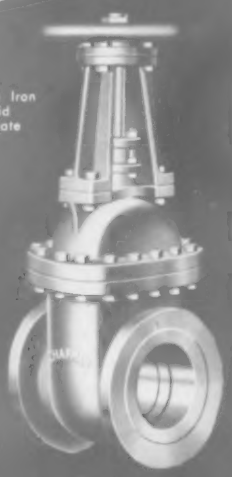

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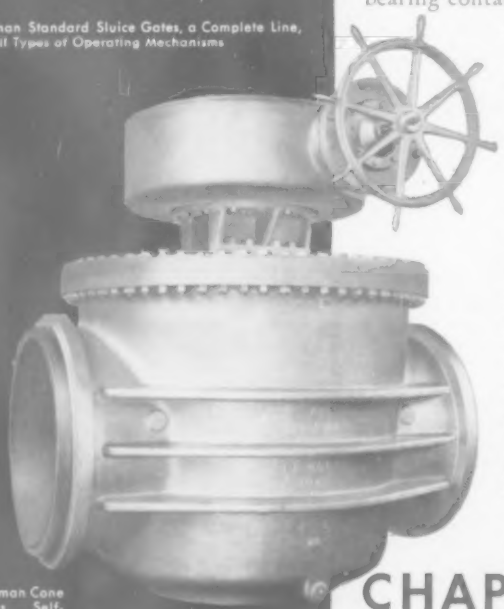

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INDIAN ORCHARD, MASSACHUSETTS

Prepared by
FRANK B. WILLIAMS
Author of "The Law of City Planning and Zoning"

Zoning and Planning Notes

With the cooperation of
EDWARD H. BASSETT
Author of "Zoning" and of "The Master Plan"

Residential District—Horseshoe Pitching Courts

LOUISIANA.—*City of New Orleans* v. *Estrade*, Supreme Court, April 27, 1942, reported 8 So. (2d) 536.

The zoning ordinance of the City of New Orleans provides that in an "A" residence district no building or premises shall be put to a non-residential use, except, among other uses, for golf courses and tennis courts. Estrade was charged with violating the ordinance by constructing on his side yard adjoining his home two horseshoe pitching courts, equipped with electric lights to illuminate them for night playing. Some five or six nights a week and on Sunday afternoons he and his friends gathered there and pitched horseshoes for several hours. He was on that account charged with operating a shoreshoe pitching game in an "A" residential area in violation of the zoning ordinance.

The city contends that since the game of pitching horseshoes is not listed in the ordinance among any of the exceptions, it follows that it is prohibited.

The Court thinks, however, that the city overlooks the underlying purpose for which the ordinance was enacted, i.e., for exclusive residential use. It was never intended to limit the citizens in the use and enjoyment of their own premises, by playing legitimate games or engaging in similar amusements there. It is not the playing of games other than golf and tennis which is prohibited, but rather the establishment and maintenance of buildings or other structures for public or semi-public use.

The fact that Estrade has erected permanent horeshoe pitching courts with electric lights for night playing does not alter the nature of the amusement. If the noise and lights are a nuisance, the neighbors have an adequate remedy in an action to abate it.

Non-Conforming Use—Parking Lot

MISSOURI.—*In re Botz*, St. Louis Court of Appeals, March 3, 1942, reported 159 SW (2d) 367.

Lillian Botz is seeking a permit to operate a parking lot for automobiles on land she owns in a multiple dwelling district. The west or front half of her land, facing Grand Boulevard, is located in a commercial district, while the east or rear half, facing Magnolia Avenue, is in a multiple dwelling district. It is the east or rear half of her land that the applicant wishes to use for parking. The zoning ordinance provides that land in a multifamily district shall not be employed commercially, for parking; consequently, the applicant can establish her parking lot on the rear portion of her land only if she can establish a non-conforming use there or obtain a variance because of practical difficulty or unnecessary hardship.

Formerly the front portion of this land was the site of an inn. At that time on the rear part of this lot there was sporadic parking by patrons of the inn, but it was never specfically set apart or utilized as a parking lot.

There is now an A&P market on the front of the lot, in the commercial district, and some of its patrons park on the vacant space there. This is permissible in a commercial district. The applicant claims that it is an unnecessary hardship to compel her to use her valuable Grand Boulevard frontage for a parking space rather than her much less valuable land in the rear.

The building commissioner refused to issue a permit for a parking lot on the rear portion of applicant's lot in a multi-family district, because such use was not in accordance with the provisions of the zoning ordinance. On application to it, the Board of Adjustment denied the appeal on the ground that the question presented was a legislative matter, not within its jurisdiction; or, in other words, not confined to the applicant alone, but extended as well to all the other owners of properties in the neighborhood, which were zoned as the applicant's property was zoned; so that relief should come, if at all, from the Board of Aldermen in the form of an amendment of the zoning ordinance and not from the Board of Adjustment as a variance, in favor of the applicant alone.

Thereupon, on certiorari to the Circuit Court of the City of St. Louis, that Court remanded the case to the Board of Adjustment, directing it to decide the case on the merits; and the Board, a second time, decided against the applicant, on the ground that the granting of the permit would not lessen the fire hazard, improve property values or promote the general welfare. This was equivalent to saying that a variance would not be in observance of the spirit of the ordinance, promote the public safety and welfare, or do substantial justice to all persons who might be affected by the granting of the permit, as the law requires in such cases.

For a second time there was an appeal to the Circuit Court, which reversed the decision of the Board. The case was then appealed to this Court, which overrules the court below and sustains the opinion of the Board of Adjustment.

The applicant cannot succeed on the basis of a non-conforming use; for, to do so, she must be obliged to allege and prove, not a commercial non-conforming use in general, bu the specific non-conforming use of parking, which admittedly she cannot do.

Moreover, the provision permitting a change from one non-conforming use to another, or the subsequent resumption of a definite non-conforming use once abandoned is limited to the use of buildings, and does not extend to the use of unimproved land. On this point the Court says:

"Indeed, there is a very logical and sound reason for making such distinction. A building represents an investment in the improvement of the land upon which it is erected; and if regard were not had for the reasonable protection of such investment, then the ordinance would frequently be confiscatory with respect to its application to particular structures. Not only is a building erected with a view to its adaptation to a specific form of use which is to be made of it, but it is often difficult, if not impossible, to convert it to an entirely different form of use. Consequently, where the building is only adaptable to nonconforming uses, the ordinance grants the special privilege, where no structural alterations are involved, of changing from one nonconforming use to another of the same or a more restricted classification, and also allows the recommencement of a definite nonconforming use which has been previously discontinued. Not so, however, in the case of land, where the owner has made no investment in its improvement, and where, in most instances, he would be expected to suffer no hardship if compelled to conform to the strict letter of the zoning plan with respect to the use to which his land might be subjected."

Finally, the Court sustains the Board in refusing to grant a variance for hardship or injustice, on the ground that the Board was justified in so doing by the evidence.

Rules of Board of Health

NEW JERSEY.—*Kurinsky* v. *Board of Health of Lakewood Township*, Supreme Court, March 2, 1942, reported 24 Atl. (2d) 803.

The Board of Health of Lakewood Township has cancelled the poultry slaughtering permit of Kurinsky for violations of the rules of the board. Kurinsky claims that the ordinance under which these rules were passed is illegal and void

"because it does not set up a standard by which the Board may be governed in passing upon applications for permits and further that its action in refusing a permit, is an unlawful restriction on the use of his property by arbitrary action without a comprehensive plan of zoning the entire community."

In ruling to the contrary, the Supreme Court says:

"We think that these contentions are without merit. The standard by which the Board is governed is not only the ordinance in question but also its rules and regulations and the Sanitary Code of the State Department of Health. . . . The repeated failure to comply with the law by Kurinsky is sufficient to withhold from him a license to continue in this business without the necessity of adopting a zone within which no permits could be granted."

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Conventions—When and Where

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AMERICAN INSTITUTE OF PLANNERS. Meeting with American Society of Planning Officials, and National Association of Housing Officials. (Hotel Pennsylvania) Exec. Sec., Miss Barbara Terrett, 1313 E. 60th St., Chicago, Ill.

May 17-19—New York, N. Y.
AMERICAN SOCIETY OF PLANNING OFFICIALS. Annual Convention. (Hotel Pennsylvania) Dir., Walter H. Blucher, 1313 E. 60th St., Chicago, Ill.

May 19-21—New York, N. Y.
NATIONAL ASSOCIATION OF HOUSING OFFICIALS. Annual Meeting. (Hotel Pennsylvania) Dir., Hugh R. Pomeroy, 1313 E. 60th St., Chicago, Ill.

May 19-21—Chicago, Ill.
AMERICAN TRANSIT ASSOCIATION. Sectional Conference on Wartime Problems. (Palmer House) Gen. Sec., G. C. Hecker, 292 Madison Ave., New York, N. Y.

May 21-25—Cleveland, Ohio
COMMUNITY CHESTS AND COUNCILS, INC. Annual Meeting. (Hotel Cleveland) Exec. Vice-Pres., Allen T. Burns, 155 E. 44th St., New York, N. Y.

***May 24-25—Kansas City, Mo.**
MISSOURI ASSOCIATION OF MUNICIPAL UTILITIES. Annual Meeting. (Hotel President) Sec.-Treas., W. J. McCarroll, Fulton, Mo.

***May 24-26—Omaha, Nebr.**
NATIONAL ASSOCIATION OF COUNTY OFFICIALS. Conference of County Officials. (Hotel Fontenelle) Sec.-Treas., George F. Breitbach, Court House, Milwaukee, Wis.

May 24-26—New York, N. Y.
NATIONAL ASSOCIATION OF PURCHASING AGENTS—GOVERNMENTAL, EDUCATIONAL, AND INSTITUTIONAL GROUP. Wartime Conference. (Hotel Waldorf-Astoria) Sec., Joseph W. Nicholson, City Purchasing Agent, Milwaukee, Wis.

May 24-28—Cleveland, Ohio
NATIONAL CONFERENCE OF SOCIAL WORK. Regional Meeting. General Secretary, Howard R. Knight, 82 N. High St., Columbus, Ohio.

May 25-28—Ottawa, Ont., Canada
CANADIAN FEDERATION OF MAYORS AND MUNICIPALITIES. Annual Conference. (Hotel Chateau Laurier) Sec., Jessica Allan, Mount Royal Hotel, Montreal, Quebec, Canada.

***May 26—New Haven, Conn.**
NEW ENGLAND SEWAGE WORKS ASSOCIATION. Annual Spring Meeting. (Hotel Garde) Sec.-Treas., LeRoy W. Van Kleeck, State Dept. of Health, Hartford, Conn.

May 26-28—Cincinnati, Ohio
AMERICAN INSTITUTE OF ARCHITECTS. Annual Meeting. (Hotel Netherlands-Plaza) Exec. Sec., E. C. Kemper, 1741 New York Ave., Washington, D. C.

May 27-28—Vicksburg, Miss.
MISSISSIPPI MUNICIPAL ASSOCIATION. Annual Convention. (Hotel Vicksburg) State Mgr., C. D. Ross, Old Merchants Bank Bldg., Jackson, Miss.

May 27-28—Harrisburg, Pa.
PENNSYLVANIA STATE ASSOCIATION OF TOWNSHIP COMMISSIONERS. Annual Convention. (Hotel Penn-Harris) Sec.-Treas., H. A. Fritschman, Upper Darby, Pa.

June 8-9—Harrisburg, Pa.
PENNSYLVANIA WATER WORKS OPERATORS ASSOCIATION. Annual meeting jointly with Pennsylvania Sewage Works Association. (Hotel Penn-Harris) Sec., I. M. Glace, 22 South 22d St., Harrisburg, Pa.

June 8-9—Harrisburg, Pa.
PENNSYLVANIA SEWAGE WORKS ASSOCIATION. Annual conference jointly with Pennsylvania Water Works Operators Association. (Hotel Penn-Harris) Sec.-Treas., Bernard S. Bush, Department of Public Health, Kirby Health Center, Wilkes-Barre, Pa.

June 8-11—Pittsburgh, Pa.
SMOKE PREVENTION ASSOCIATION. Annual Meeting. (Hotel William Penn) Sec., Frank A. Chambers, 139 North Clark St., Chicago, Ill.

***June 9-10—Rockford, Ill.**
ILLINOIS ASSOCIATION OF SANITARY DISTRICTS. Annual Convention. (Hotel Faust) Sec.-Treas., Earl D. DePew, 304 Unity Bldg., Bloomington, Ill.

June 9-11—Albany, N. Y.
NEW YORK STATE CONFERENCE OF MAYORS AND OTHER MUNICIPAL OFFICIALS. Annual Meeting. (Hotel Ten Eyck) Exec. Sec., William P. Capes, 6 Elk St., Albany, N. Y.

***June 14-16—Omaha, Neb.**
AMERICAN PLANNING AND CIVIC ASSOCIATION. Citizens Conference on Planning. (Hotel Fontenelle) Exec. Sec., Miss Harlean James, Union Trust Bldg., Washington, D. C.

***June 14-17—Los Angeles, Cal.**
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS. Semi-Annual Meeting. (Hotel Biltmore) Exec. Asst. Sec., Ernest Hartford, 29 W. 39th St., New York, N. Y.

June 13-17—Pittsburgh, Pa.
MUNICIPAL FINANCE OFFICERS' ASSOCIATION OF THE UNITED STATES AND CANADA. (Hotel William Penn) Exec. Sec., Carl H. Chatters, 1313 E. 60th St., Chicago, Ill.

June 15-18—Cleveland, Ohio
AMERICAN WATER WORKS ASSOCIATION. Conference on War-Winning Water Works Operations. (Hotels Carter and Statler) Sec., Harry E. Jordan, 500 Fifth Ave., New York, N. Y.

***June 18-19—Boulder, Colo.**
COLORADO MUNICIPAL LEAGUE. (Hotel Boulderado) Sec., H. A. Storey, University of Colorado, Boulder, Colo.

***June 21-22—Chicago, Ill.**
NATIONAL ASSOCIATION OF TAX ADMINISTRATORS. Annual Meeting. (Hotel Shoreland) Acting Exec. Sec., George H. Watson, 1313 East 60th St., Chicago, Ill.

June 21-25—Cleveland, Ohio
AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS. National Meeting. Sec., H. H. Henline, 33 W. 39th St., New York, N. Y.

***June 22-24—Saskatoon, Sask., Canada**
SASKATCHEWAN URBAN MUNICIPALITIES ASSOCIATION. (Hotel Bessborough) Sec.-Treas., W. E. Hodge, 503 Scott Block, Moose Jaw, Sask., Canada.

June 22-24—New York, N. Y.
SPECIAL LIBRARIES ASSOCIATION. Annual Convention. Exec. Sec., Kathleen B. Stebbins, 31 E. 10th St., New York, N. Y.

***June 23—Mansfield, Ohio**
OHIO CONFERENCE ON SEWAGE TREATMENT. Annual Conference. (Hotel Mansfield-Leland) Sec., J. R. Turner, Sewage Treatment Plant, Mansfield, Ohio.

June 24-26—Baltimore, Md.
EASTERN ASSOCIATION OF FIRE CHIEFS. Annual Convention. (Hotel Lord Baltimore) Sec., Charles E. Clark, Box 217, Wayne, Pa.

July 11-16—Dallas, Texas
SOUTHWESTERN CHAMBER OF COMMERCE INSTITUTE. (Hotel Adolphus) Mgr., Roger Miller, Chamber of Commerce Bldg., Dallas, Texas.

July 19-20—Harrisburg, Pa.
PENNSYLVANIA CHIEFS OF POLICE ASSOCIATION. War Conference. (Hotel Penn-Harris) Sec., F. B. Titus, Lansdowne, Pa.

July 25-31—Missoula, Mont.
ROCKY MOUNTAIN INSTITUTE FOR COMMERCIAL ORGANIZATION EXECUTIVES. (Montana State University Campus) Mgr., Donald Marcellus, 1445 Rand Tower, Minneapolis, Minn.

July 27-29—Buffalo, N. Y.
NEW YORK STATE ASSOCIATION OF CHIEFS OF POLICE. (Hotel Statler) Sec.-Treas., R. W. Morris, P. O. Box 346, Geneva, N. Y.

August 1-7—Atlanta, Ga.
SOUTHEASTERN INSTITUTE FOR COMMERCIAL ORGANIZATION EXECUTIVES. (Emory University) Mgr., L. P. Dickie, Chamber of Commerce Bldg., Atlanta, Ga.

August 15-21—Evanston, Ill.
NATIONAL INSTITUTE FOR COMMERCIAL AND TRADE ORGANIZATION EXECUTIVES. Annual Session. (Northwestern University) Sec.-Treas., Clarence R. Miles, 832 First National Bank Bldg., 38 S. Dearborn St., Chicago, Ill.

***August 31-September. 5—Chicago, Ill.**
INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual Convention. (Palmer House) Sec., Daniel B. Tierney, 8 Robbins Rd., Arlington, Mass.

***Sept. 10-14—Chicago, Ill.**
INTERNATIONAL CITY MANAGERS' ASSOCIATION. Annual Conference. Edgewater Beach Hotel) Dir., Clarence E. Ridley, 1313 E. 60th St., Chicago, Ill.

Repair and Tax-Stabilization Reserve Funds Authorized for New York Municipalities

Under the terms of what is now Chapter 542 of the Laws of 1943, the cities, villages, towns, and counties of New York State are permitted to establish repair reserve funds and tax-stabilization reserve funds, in addition to the capital reserve funds previously authorized by state law.

The *repair reserve funds* provided for by the new law would provide moneys for post-war repairs of public property and equipment which cannot be undertaken now because of the war emergency. No expenditure may be made from such funds except pursuant to a resolution by the governing body of such municipal corporation and at a time when labor and materials necessary for such repairs are available. Moneys in such fund may be deposited in designated banks or trust companies or invested in obligations of the State of New York or the Federal Government, except that, prior to July 1, 1944, they may be invested only in war bonds.

The purposes for which the *tax stabilization reserve funds* may be spent are restricted as follows:

1. For the local share of home relief to the extent such share shall in any year exceed the local share of home relief during the fiscal year commencing on or next after January 1, 1940.

2. For the acquisition of equipment for which the municipality may not borrow, to the extent the amount appropriated in any fiscal year for such equipment exceeds the total amount so appropriated in the fiscal year commencing on or next after January 1, 1940.

3. For street, highway, or parkway maintenance and repair, to the extent that such appropriations are in excess of the amounts appropriated for such purpose in the fiscal year of such municipal corporations commencing on or next after January 1, 1940.

4. Money may be appropriated to the capital reserve fund as now provided by law or to a repair reserve fund established pursuant to this act.

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Municipal and Civic Publications

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Wartime Police Administration

Municipal Police Administration.—Published for the Institute for Training in Municipal Administration by The International City Managers Association, 1313 E. 60th St., Chicago, Ill. Second Edition, 1943. xi + 533 pp. $7.50.

The loss of trained police personnel to the armed forces and to war industry has presented a real challenge to police officials and chief municipal administrators. The purpose of this volume is to make available to police officers and to those who aspire to administrative posts the best accepted administrative methods as applied specifically to police problems. This second edition contains much new information, and all of the material is based on actual experience and practice as observed in a large number of cities. Presents a practical approach to such subjects as: wartime police problems; police organization; recruitment and salaries; crime prevention; selective enforcement; distribution of patrol; control of equipment; modern records system; measuring results; and relations with the public.

Wartime Assessment Problems

Papers Presented at the Ninth National Conference on Assessment Administration.—National Association of Assessing Officers, 1313 E. 60th St., Chicago, Ill. 1942. 64 pp.

The Ninth National Conference on Assessment Administration, held at Denver, Colo., on September 9-12, 1942, was a conference on assessment problems connected with the nation's war effort. This pamphlet contains lectures that were delivered there, and a number of statements prepared by round-table discussion leaders, as well as a review of recent legislation and court decisions.

Wartime Local Financial Problems

Wartime Problems of State and Local finance.—Tax Institute, University of Pennsylvania, Philadelphia, Pa. 1943. ix + 267 pp. $2.50.

This book is the product of the series of regional conferences on wartime problems of state and local finance, sponsored by the Tax Institute and made the topic of its annual symposium for 1942. Various experts discuss the effect of the war on state and local costs and revenues, intergovernmental fiscal problems as accentuated by the war, shaping fiscal policies to aid in post-war adjustments, and state and local fiscal responsibilities in winning the war. While the authors at no time lose sight of the last-mentioned duty, the feeling is clear throughout that basic obligations include the maintenance of financial stability, intensification of effort to solve both local and intergovernmental fiscal problems, and the use of utmost foresight in the formulation of fiscal policies and plans.

Housing Project Victory Gardens

Two publications of the Federal Public Housing Authority, National Housing Agency, Washington, D. C., 1943:

Victory Gardens for Housing Projects.—4 pp., offset.

Information on victory gardens, for the benefit of managers of housing projects, based on pertinent publications of the United States Department of Agriculture, with necessary changes to suit housing project conditions.

Victory Gardens for Tenants of Housing Projects.—10 pp., offset.

Victory garden information intended as assistance to the tenants of housing projects. Suggests that it be read at a meeting of tenant groups, posted on a bulletin board, or circulated among the interested tenants.

Local Economic Readjustment

Impact of the War on the Pittsburgh, Pennsylvania Area.—Employment and Occupational Branch, Post-War Division, Bureau of Labor Statistics, United States Department of Labor, Washington, D. C. 1943. iv + 88 pp., mimeo.

This is the first working notebook in a projected series intended to describe the wartime changes and to suggest the post-war readjustment problems of selected local areas. It is designed to aid in the development of locally directed programs of economic readjustment and to indicate the extent to which local readjustment is related to the prospects for high-level economic activity for the nation as a whole.

Wartime Municipal Budgets

Factors in Making 1943 Budgets.—Municipal Finance Officers of the United States and Canada, 1313 E. 60th St., Chicago, Ill. 1943. 4 pp., offset. 25c.

Bulletin dealing with the factors which may be taken into account in preparing a budget during wartime. Indicates what the rapidly changing conditions may be during the coming year, how they will affect the city's revenues and expenditures, and the steps to be taken to meet the problems they will bring.

Ordinance Codification

Codification of Municipal Ordinances.—Prepared by Charles S. Rhyne, Executive Director, National Institute of Municipal Law Officers, 730 Jackson Place, Washington, D. C. 1943. 43 pp. $2.00.

The information presented in this study was forwarded to the National Institute by the attorneys for member cities in response to a questionnaire requesting a report on the experience of each city in the codification of its ordinances. Discusses the need for, the procedure for, and the problems of ordinance codification, and presents statutes authorizing ordinance codification, court decisions on legal problems created by ordinance codification, and reports of various cities on codification experience.

City Recreation Program

Long Range Recreation Plan—Town of Kearny, New Jersey.—Prepared for the Kearny, N. J., Board of Recreation Commissioners by National Recreation Association, 315 Fourth Avenue, New York City. 1942. 56 pp., offset. $1.00.

Purpose of this report is to set forth a long-range plan of properties needed in a well-rounded recreation program for the town of Kearny, and to make suggestions on the administration of the town's recreation program. Emphasis is given to recognized standards as a guide in sound planning, functional design of areas, trends in population, and unifying the assets of the schools and city in relation to recreation.

Children in America

White House Conference on Children in a Democracy—Final Report.—Children's Bureau, United States Department of Labor, Washington, D. C. 1942. xxii + 392 pp. 65c.

This report is a much fuller statement of facts and conditions about many phases of child life in America than was contained in the General Report of the Conference issued in May, 1940. The factual foundations relate mainly to the year 1940, but its philosophy and proposals are applicable alike to the war and post-war period. Presents a unified picture of the life and growth of America as related to children, including backgrounds, the economic problem, educational, health, and social services, and recommendations for future policy.

Urban Redevelopment Act

Draft of an Act for Urban Development and Redevelopment.—Prepared by Alfred Bettman, Chairman, City Planning Commission of Cincinnati, Ohio. Distributed by American Society of Planning Officials, 1313 E. 60th St., Chicago, Ill. 1943. 14 pp., mimeo. 35c.

Although most of the states have planning enabling legislation, this bill contains (1) a section for the creation of local planning bodies which differs in certain respects from the standard planning enabling acts, and (2) provision for urban redevelopment on a metropolitan basis. This draft of an act provides that private redevelopment corporations shall be organized under the general corporation laws of the state. This bill provides the machinery by which development or redevelopment can take place on the local level.

Supplementary legislation, probably at the federal level, would be required to provide the inducements to encourage private enterprise to engage in urban redevelopment. (See pages 47 and 71 of this issue.)

Power Market Survey

A Power Market Research and Planning Program.—Snohomish County Public Utility District No. 1. Under the technical direction of W. S. McCrea, Jr., Electrical Engineers, and Washington State Planning Council. 1943. 25 pp., mimeo.

Committed to the public power principle of "the widest possible distribution of electrical energy at the lowest possible cost," the Snohomish County Public Utility District undertook the survey of potential power markets on a broad comprehensive basis, which is reported in this brochure. The research and planning program was pursued along the seven main lines of general facts, basic resources, economic data, wholesale and retail trade, governmental organization, population factors, transportation, and public improvement. This report is intended to inform of the progress being made in this district and to provide the means by which a similar program might be initiated on a state-wide public utility district basis.

Tax Shifting

The Shifting and Incidence of Taxation.—By Otto von Mering. The Blakiston Press, Philadelphia. 1942. 262 pp. $3.25 from THE AMERICAN CITY.

Taxation has become so dominant a factor that studies of its incidence have emerged from academic treatment. Professor von Mering attacks the problem with graphs and mathematics. He covers every type of tax, and plots the effect of each on price.

The author advises caution in evaluating the effect of a tax by statistical methods alone. The general proposition may be stated as follows: "Whether and to what extent taxes may be shifted depends on the degree to which supply and demand may be restricted with advantage." Thus, even the single monopolist may not be able to shift taxes completely, and even an income tax may be shifted to a degree.

Some conclusions from Professor von Mering: a tax on rent cannot be shifted; a tax on building costs will be borne by the tenant; a tax on an article will reduce the number of sales; in a free economy, taxes on the producer can be shifted, but when prices are fixed by the government, they cannot be shifted to the consumer. Some debatable statements are: that a consumption tax leaves production unchanged, an income tax increases it, and a capital tax increases it still further.

The matter of tax shifting deserves the attention of municipal authorities as well as national legislators. It must be clear that taxes should be so drawn as to hamper production as little as possible.

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The Airplane of the Future

The Airplane and Tomorrow's World.—By Waldemar Kaempffert. Public Affairs Committee, 30 Rockefeller Plaza, New York City. 1943. 31 *pp.* 10c.

Pamphlet which gives a critical discussion of economic and social influences of the airplane, and presents dramatic facts about aerial transportation which emphasize the conflict between the "international airplane" and "nationalistic" ideas. The main point stressed by the author is that isolation and the airplane cannot go together. Discusses, also, the effect the airplane will have on cities and city planning. (See also page 5 of this issue.)

Fire-Department Improvisations

Improvised Fire-Fighting Equipment in Washington Cities.—Association of Washington Cities in cooperation with the Bureau of Governmental Research, University of Washington, Seattle, Wash. 1943. 22 *pp.*

Descriptions, with the aid of illustrative photographs, of various fire department improvisations carried on in Washington cities—improvisations made necessary by the decreasing stock of materials available for civilian use.

Wartime Day Care of Children

Wartime Nurseries.—By Winifred Cobbledick. Bureau of Public Administration, University of California, Berkeley, Calif. 1943. *i* + 44 *pp., mimeo.*

Concise review, based on extensive materials, which deals with the need for wartime nurseries, forms of day care in the United States, federal participation in the child care program, and child care activities and plans in California and in other states.

Equalizing Library Opportunity

Equal Chance—Books Help to Make It.—American Library Association, Chicago, Ill. 1943. 32 *pp.*

Popular pamphlet which brings out strikingly, with the aid of picture graphs and statistics, the inequality of library opportunity from community to community, and calls for teamwork among civic, social, and educational groups to build public support for libraries.

Signal Standards

Revised Edition of Specifications and Operating Standards.—International Municipal Signal Association, Inc., 8 E. 41st., St., New York City. 1942. 144 *pp.* $1.50.

This is the International Municipal Signal Associations' revised edition of the 1942 Specifications and Operating Standards, intended as an aid to manufacturers of signal apparatus in their job of protecting life and property in their various municipalities. The Association states that for the duration of the war it will accept such substitutions in these specifications as are practical and necessary.

The Weapon of Food

The Food Front—A Series of Eleven Lectures.—Office of Defense Health and Welfare Services, Federal Security Agency, Washington, D. C. 1942. *iii* + 52 *pp.*

This series of lectures, delivered about a year ago, has added significance now, in view of the important role which food has come to play in global warfare. The lectures, presented by various experts on the subject, cover such topics as nutrition and public health, food conservation and production, and what the war has taught us about food.

Wartime Recreation Problems

Wartime Recreation.—Chicago Recreation Commission, 160 N. LaSalle St., Chicago, Ill. 1942. 80 *pp., mimeo.* 50c. *Apply to Municipal Reference Library, City Hall, Chicago, Ill.*

Proceedings of the Chicago Wartime Recreation Conference, held December 11, 1942, on the theme "Recreation for Total Victory." Contains speeches and discussion on the recreation problems which war brings to the community, and the role of recreation in the post-war world.

Wartime Public Policy

Public Policy—1942.—Edited by C. J. Friedrich and Edward S. Mason. Graduate School of Public Administration, Harvard University, Cambridge, Mass. 1942. *vii* + 275 *pp.* $3.00 *from* THE AMERICAN CITY.

The third in a series of annual volumes containing contributions from public officials, faculty members, Fellows, and others, which aims to present critical studies of public policy which will combine the experience and viewpoint of the practical administrator with the detachment of the scholar. The theme of this volume is American society in the emergency, and the material is grouped into: war morale and civil liberties; labor and the war; and problems of war finance and government. The chapter which describes the effect of the defense program on the Quincy, Mass., area, would be of special interest to readers of THE AMERICAN CITY.

Occupational Surveys

Community Occupational Surveys.—By Marguerite Wykoff Zapoleon. U. S. Office of Education, Federal Security Agency, Washington, D. C. 1942. *viii* + 199 *pp.* 25c. *Apply to the Superintendent of Documents, Washington, D. C.*

A bulletin which presents techniques for community occupational surveys, based on the experience of those who have conducted such surveys, and on an examination of published material on the subject. Includes descriptions of particular surveys and of the occupations statistics obtained in the federal census and in a state census.

Juvenile Delinquency in Wartime

Juvenile Delinquency.—By M. C. Hibben. Editorial Research Reports, 1013 Thirteenth St., N.W., Washington, D. C. 1943. 11 *pp.*

Brief, outlined discussion of the rise of juvenile delinquency in war, wartime experience in Great Britain, and juvenile delinquency in the United States.

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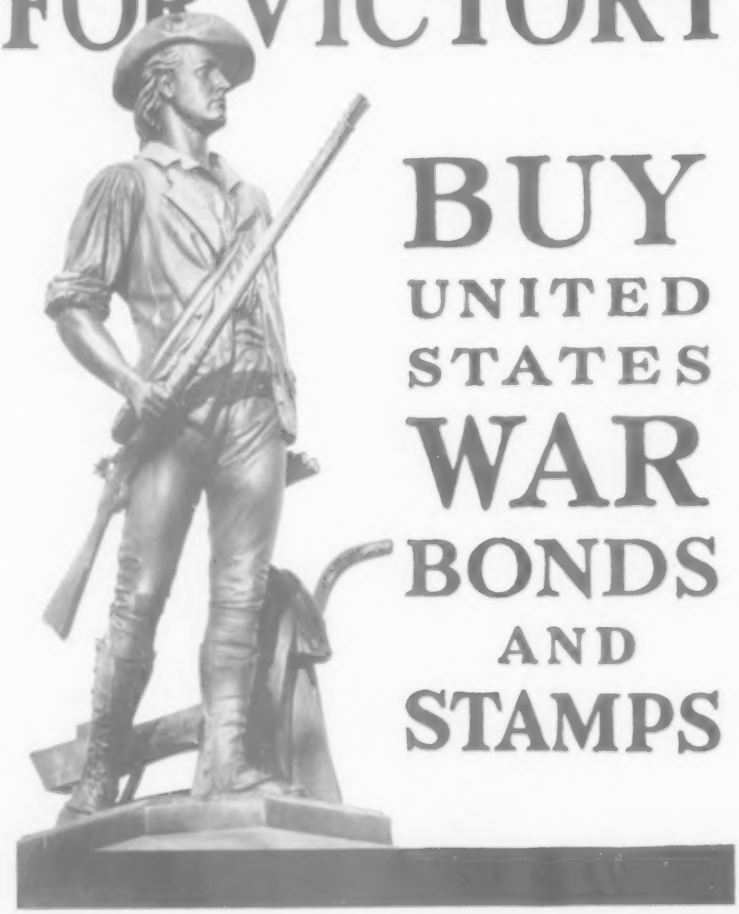

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City Schools and Health Care

Health Services in City Schools.—By James Frederick Rogers, M.D., Consultant in Hygiene, United States Office of Education, Federal Security Agency, Washington, D. C. 1942. vii + 50 pp. 15c.

A biennial survey of health services in city schools covering the period 1938-1940—the data being presented separately for three groups of cities—those with a population of 100,000 and over; those from 30,000 to 100,000; and those from 10,000 to 30,000. Reports on services rendered to teachers and other employees, reviews the progress from 1930-1940, and describes representative local health services in six cities.

Regional Planning Bibliography

A Regional Planning Browsing List.—Selected by John M. Gaus, Charles Dyer Norton Professor of Regional Planning, Harvard University. Library of the Departments of Landscape Architecture and Regional Planning, Harvard University, Cambridge, Mass. 1943. 7 pp., mimeo.

A list of some 85 book, pamphlet, and periodical references on regional planning, including much material by outstanding men and organizations in the field.

Civilian Evacuation

The Civilian Evacuation Program—Planning for Evacuation and Reception Care.—United States Office of Civilian Defense and Office of Defense Health and Welfare Services, Washington, D. C. 1943. vi + 40 pp., offset.

This bulletin covers the problems of planning for the voluntary evacuation of designated groups of civilians, making surveys to find out the suitability of communities for reception, and arranging for the necessary supplementation of services and facilities during removal and after relocation. The recommendations are intended to permit sufficient flexibility to enable authorities to adjust the plan to the particular emergency with which they are confronted.

A. S. T. M. Standards

A. S. T. M. Standards on Rubber Products.—American Society of Testing Materials, 260 Broad St., Philadelphia, Pa. 1943. viii + 300 pp. $1.75.

Latest compilation of all A. S. T. M. standards on rubber products, including 41 specifications, physical and chemical tests for a wide range of rubber products, and also the emergency alternate provisions and other emergency methods issued to expedite procurement and conserve crude rubber. Contains a bibliography of the more important recent sources of information on the mechanical testing of rubber.

A. S. T. M. Specifications for Steel Piping Materials.—American Society of Testing Materials, 260 Broad St., Philadelphia, Pa. 1942. vi + 249 pp. $1.75.

This compilation of A. S. T. M. Standards on steel-piping materials contains all the specifications for carbon-steel and alloy steel pipe and tubing issued by the American Society for Testing Materials through the work of its Committee A-1 on Steel. Emergency alternate provisions, issued to aid in conserving critical materials, are also included.

Motor Transportation

Motor Traffic Management.—By H. E. Stocker, Assistant Professor of Transportation, New York University, New York City. Prentice Hall, Inc., New York. Revised Edition, 1942. xxi + 369 pp. $5.00 from THE AMERICAN CITY.

The objective of this book is to provide a practical working volume for all who are interested in motor traffic management, including students of motor transportation. Discusses organization and management of a motor carrier, comparative advantages of motor and railroad transportation, selling transportation service, subsidy of highway transportation, federal regulation of motor transportation, freight rates, and motor tariffs.

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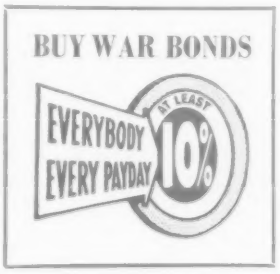

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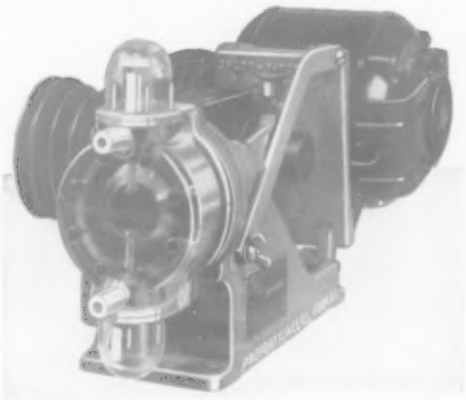

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Ferrous Sulphate	Ferric Chloride
Ferric Sulphate	Sulphuric Acid
Calgon	Aqua Ammonia
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Booth 63, A.W.W.A. Conference, Cleveland, June 15th to 18th, 1943

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Venereal Disease and War

Venereal Disease, Prostitution, and War.—Assembled by the Committee on Courts and Wartime Social Protection, American Bar Association, Washington, D. C. 1943. ix + 65 pp., offset.

The purpose of this report is to interest state and local Bar Associations in procuring legislative action and enforcement programs respecting control of venereal diseases and suppression of prostitution. Gives a general outline of the problem, emphasizing that the condition and responsibility is local, and provides an index to state laws and statutes on the subject.

Motor Accident Definitions

Uniform Definitions of Motor Vehicle Accidents.—Bureau of the Census, United States Department of Commerce, Washington, D. C. 1943. v + 17 pp.

The adoption of this manual by those engaged in the collection, tabulation, and publication of statistical data relating to motor-vehicle accidents would aid in achieving uniformity and comparability of the published statistics. It is designed for statistical classification only, and, except for the items covered by the manual, does not apply to the standards of motor-vehicle accident reporting.

Proposed Sewer Rental System

Sewer Rental Study.—City Planning Board, Concord, N. H. 1943. 44 pp., mimeo.

A factual report pertaining to the proposed establishment of a system of sewer rentals in the city of Concord, N. H. Its purpose is to present certain related facts upon which the City Solicitor may prepare an ordinance.

Wartime Personnel Problems

Protecting Civil Service and Pension Rights of City Employees Who Enter the Armed Forces of the United States and Granting Free and other Privileges to Members of the Uniformed Forces.—Municipal Reference Library, Chicago, Ill. 1943. 21 pp., typed.

A compilation prepared by a member of the Chicago City Council, which outlines ordinances, orders, and resolutions introduced in city councils, and extracts from annual reports of civil service commissions on such subjects as leaves of absence, additional salaries, and free privileges for city employees who enter the armed forces, and veteran preference.

Recent Area Figures

Areas of the United States—1940.—Bureau of the Census, United States Department of Commerce, Washington, D. C. 1942. v + 465 pp. $1.00. Apply to the Superintendent of Documents, Washington, D. C.

Presentation of the total, land, and water areas for the United States as of April 1, 1940. Area figures are shown for the states, counties, county subdivisions, incorporated places having 1,000 or more population, and the territories and possessions. These are entirely new determinations based upon the best available maps, and the figures represent the first basic remeasurement of the United States since the Tenth Decennial Census of 1880.

Analysis of Economic Planning

Economic Planning, Its Aims and Implications.—By Claude David Baldwin. The University of Illinois Press, Urbana, Ill. 1942. 188 pp. $2.00 (paper) $2.50 (cloth).

Critical examination of some of the implications which accompany the extension of the idea of economic planning, written in the hope of leading to a more careful consideration of proposals for planning. Looks deeply into the definitions, criticisms, and objectives of economic planning, the place of a pricing mechanism, the organization of production, the distribution of income, and allocation of labor. The author attempts to steer a middle course between the enthusiastic advocate and the vigorous opponent of planning and criticizes both for exaggerating the effects which institutions have on man's inner nature.

Local War Training Information

Local War Training Committee Handbook.—New York State War Council, Albany, N. Y. 1943. 17 pp., mimeo.

First draft of a detailed statement of the organization and functions of Local War Training Committees and the training services of the New York State Office of War Training available to city and county war councils.

Emergency Public Works

Public Works in Civilian Defense.—American Public Works Association, 1313 E. 60th St., Chicago, Ill. 1943. 20 pp. 50c.

Some papers presented at the 1942 Public Works Congress on organization, plans, and procedures for emergency public works, including discussion of policies and practices in connection with air raid shelters, control centers, warning signals, concealment of street and traffic lights, emergency organization, and equipment.

Sales Tax Bibliography

Sales Tax.—A List of Recent References.—Compiled by Anne L. Baden, under the direction of Florence S. Hellman, Chief Bibliographer, Division of Bibliography, Library of Congress, Washington, D. C. 1942. 61 pp.

List of some 543 publications dealing with the sales tax in general, and its application in the federal, state and municipal governments and in foreign countries. Also contains a list of bibliographies on the sales tax.

Reducing Prison Cost

Prisons Cost Too Much.—By Leonard V. Harrison, with the assistance of William Vargish. The Committee on Youth and Justice, Community Service Society of New York, 105 E. 22d., St., New York City. 1942. 35 pp. 10c.

Presentation of the astonishing facts of the increased financial burden which prisons are putting on the state of New York, and of suggestions for sensible ways by which the burden may be reduced. The recommendations are broad in scope and follow lines of tested penological progress. The author points out that it is possible to save money in ways that will facilitate the restoration of prisoners to normal, responsible living in society.

Post-War Business Reserves

Business Reserves for Post-War Survival.—By Mark S. Massel. National Planning Association, 800 21st., N.W., Washington, D. C. 1943. 132 pp. 50c.

A study of the effect of war conditions on the financial adjustment problems of business, which presents a review of the general outlines of accounting, an analysis of the particular purposes of special reserve accounts and of related corporate financial policy, and a discussion of the policy issues connected with these reserves.

Boston Geodetic Survey

Report on a Geodetic Survey for Boston—1935-1941.—City Planning Board, Boston, Mass. 1942. 197 pp.

This report of the Boston City Planning Board pertains to an engineering survey, the purpose of which was the making of an Official Map of the city. The project was an attempt to retrieve and expand the work of the Board of Survey fifty years ago, using the latest accepted technical methods. This report describes only the triangulation portion of the control survey, the completed phase of the work.

The War and the Negro

Negroes and the War.—By Chandler Owen. United States Office of War Information, Washington, D. C. 1943. Unpaged.

By means of vivid text and illustration, this booklet tells what Negroes are doing in agriculture, industry, and the armed forces; what Negroes have to lose if the Axis wins; and what they have to gain by an American victory.

Women and War Work

Women at Work in Wartime.—By Katherine Glover. Public Affairs Committee, 30 Rockefeller Plaza, New York City. 1943. 31 pp. 10c.

Popular, factual pamphlet based largely on official government documents, which is a practical guide both for the woman who is looking for a war job, and for her community which must provide child care centers, transportation, and community services.

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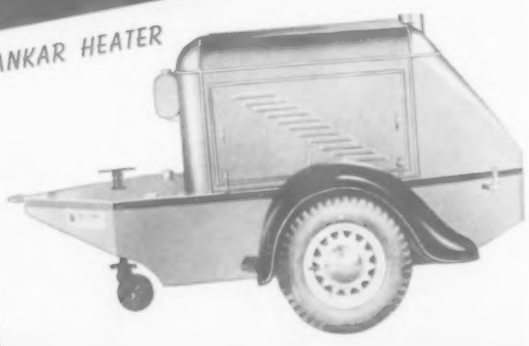

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Post-War Planning Report

National Resources Development Report for 1943.—National Planning Board, Washington, D. C. 1943. v + 81 pp.

Contains Part I of the National Resources Development Report for 1943—which is called "Post-War Plan and Program" and which presents a summary of findings and recommendations in regard to plans for transition from war to peace, for development of an expanding economy, for services and security, and for action by state and local governments and regions. Presented as material for consideration by the public and by those who determine our national policies. Part II—"Wartime Planning for War and Post-War"—is printed separately as House Document 128, Part 2.

Regional Resources Study

Development of Resources and of Economic Opportunity in the Pacific Northwest.—Report of the Pacific Northwest Regional Planning Commission to the National Resources Planning Board, Washington, D. C. 1942. 178 pp. $1.50. Apply to the Superintendent of Documents, Washington, D. C.

A report which embodies the series of studies of land and migration problems in the Pacific Northwest region, undertaken by the Pacific Northwest Regional Planning Commission in 1938. Part I is a summary of the preliminary "background" study. Part II is a survey of potential land development; Part III analyzes present and potential industrial development in the region; and in Part IV, an attempt is made to focus the earlier studies in a first draft of a plan and program of internal improvements for the region.

Other Reports Received

Integration of Rapid Transit Facilities of the City of New York.—An Abridgement by Arthur J. Waterman, Jr., New York University, New York City. 1942. 27 pp.

Preparation of Maps in Connection with War Housing Programs.—Division of Urban Studies, National Housing Agency, Washington, D. C. 1943. 10 pp., offset.

Food Rationing in Great Britain. By Kendrick Lee. Editorial Research Reports, 1013 Thirteenth Street, N. W., Washington, D. C. Vol. 1, 1943. 19 pp. $1.00.

Summary of Motor Vehicle Accident Fatalities—Second Quarter and Third Quarter 1942.—Bureau of the Census, Department of Commerce, Washington, D. C. 1943. 41 pp., offset.

Guide to Federal War Housing Legislation.—National Housing Agency, Washington, D. C. 1943. 18 pp., offsets.

ALBERT LEA, MINN.—Annual Report, 1942. 31 pp.

ARIZONA.—"A Comprehensive Development Plan for Arizona." 1942 Report, Arizona Resources and Planning Board. 1943. 21 pp.

BALTIMORE, MD.—Pertinent Financial Data, City of Baltimore, as at January 1, 1943. Commission on Governmental Efficiency and Economy, Inc., Baltimore, Md. 16 pp.

BUFFALO, N. Y.—Annual Report, Municipal Civil Service Commission, 1942. 23 pp.

CALIFORNIA.—Proposed State Capital Improvement Program and Recommendations, 1943-1945. California State Planning Board, Sacramento, Cal. 1943. iv + 58 pp., mimeo.

CHICAGO, ILL.—"Chicago Plans." *The New Pencil Points*, March, 1943. pp. 34-63. 25c.

CINCINNATI, OHIO.—Annual Report, 1942, Department of Purchasing. 8 pp., mimeo.

CORONADO, CAL.—Annual Report, 1942. 28 pp., mimeo.

DARIEN, CONN.—Annual Report, 1942. 102 pp.

ERIE, PA.—Budget for 1943. 58 pp.
—Annual Report, Director, Department of Accounts and Finance, as of January, 1943. 81 pp.

ILLINOIS.—County Health Departments. Research Department. Illinois Legislative Council, Springfield, Ill. 1943. ii + 25 pp., mimeo.

IRVINGTON, N. J.—Annual Report, 1942. 96 pp.

KANSAS CITY, MO.—Personal Property Taxes in Kansas City and Jackson County. Civic Research Institute, Kansas City, Mo. 1942. 29 pp., offset.

LONG BEACH, CAL.—Annual Report, Planning Commission, 1942. Part I, 24 pp.; Part II, 11 pp., mimeo.

MARYLAND.—Planning Activities During 1939-1942 and Projected Program for 1944-1945. Maryland State Planning Commission, Baltimore, Md. 1942. 16 pp., mimeo.

MILTON, MASS.—Annual Report, 1942. 320 pp.

NEW HAVEN, CONN.—Annual Report, Department of Fire Service. 1943. 60 pp.

OAK PARK, ILL.—Annual Report, Department of Public Works, for the year ending Dec. 31, 1942. 59 pp., mimeo.

ROBERTSON COUNTY, TENN.—The Government of Robertson County, Tenn. Tennessee Taxpayers Association, Nashville, Tenn. 1943. 124 pp., mimeo.

SAN DIEGO, CAL.—Planning San Diego. City Planning Department, San Diego, Cal. 1943. 27 pp.

UNION COUNTY, N. J.—Horticultural Beauty in the Union County Park System. Union County Park Commission, Warinanco Park, Elizabeth, N. J. 1943. 12 pp.

WASHINGTON.—Admission Taxes. Association of Washington Cities, Seattle, Wash. 1943. 9 pp., offset and mimeo.
Back to the Country—The Rurban Trend in Washington's Population. Agricultural Experiment Station, State College of Washington, Pullman, Wash. 1942. 33 pp.

WILMINGTON, MASS.—Annual Report, for the financial year ending Dec. 31, 1942. 166 pp.

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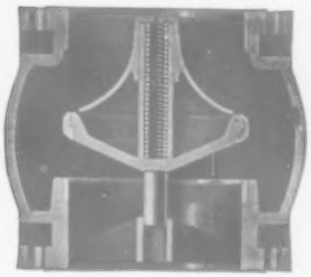

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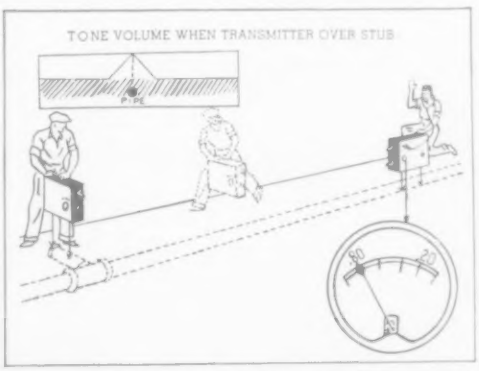

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CAN a modern city control its destiny? Can it, by forethought and action, so guide its future as to arrest congestion and decay, and produce in their stead a healthy, orderly growth, properly protected against blight? "Yes!" answers the Chicago Plan Commission to these questions, and in a 30-page article in the March issue of *New Pencil Points* it brings forth in support of its opinion a preview of its new comprehensive master plan. Many planners have worked out hypothetical plans for ideal cities, but this article called "Chicago Plans"* represents an outstanding attempt to redesign an existing city with its complexity of vested interests in land, building business, and industry.

The emphasis of this new Chicago plan is not upon the great public buildings and boulevards of the first Chicago plan, but upon the conception of a city that may become a pleasant and orderly place in which to live and work. Accordingly, the new plan contemplates the clearance and rebuilding of the blighted areas. This means not only the removal of old and dilapidated structures, but wiping out rigid rectangular gridiron patterns with monotonous rows of houses on narrow lots facing heavy traffic thoroughfares.

As the first step in carrying out the plan, the Chicago Plan Commission has prepared maps showing the location of the blighted area, the middle-aged conservation area, and the areas of new growth. Plans are presented in the article in the *New Pencil Points* for rebuilding these blighted areas and for developing new neighborhoods on the vacant land in the city. Included also are plans for a new express highway system, for airports, recreation areas, the central business district improvements, and new industrial areas. All of these elements in the new master plan are integrated together so that the neighborhoods are in proper relationship to highways, parks, and business centers.

In making plans for the post-war reconstruction of our large American cities, municipal officials, real estate men, city planners, and architects may find that these plans for Chicago offer many valuable suggestions.

* Reprints are available (at 25 cents each) from *New Pencil Points*, 330 West 42d Street, New York.

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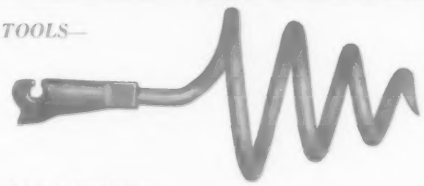

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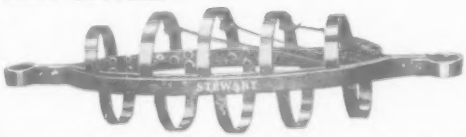

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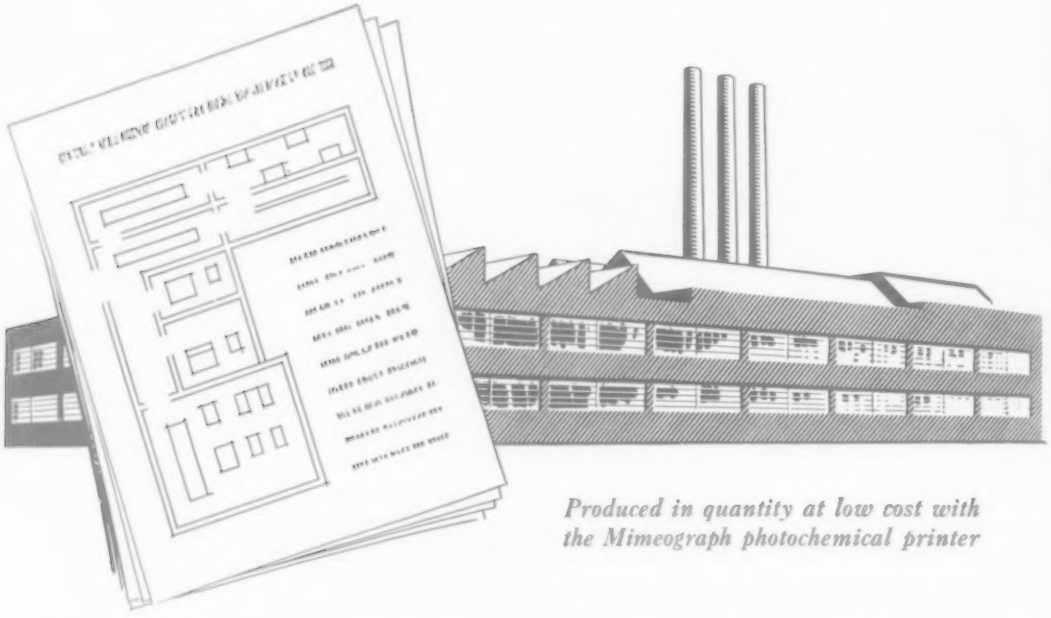

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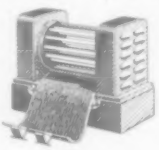

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News and Illustrations

Items of Interest to City, Town and County Officials and Others Concerned with the Economical Construction and Efficient Operation of Public Improvement Undertakings

New Chemical Feeder Enters Water Works Field

Showing Var-I-Feeder removed from case. Note illuminated panel with finger-tip control and transparent, illuminated, reagent head.

Jeff Corydon, well known during the last 10 years in the water works and sewage fields for the development of low-cost chemical feeders, hypochlorinators, and proportioners, has recently formed a new company known as Chem-Feeds, Inc., at 77 Reservoir Ave., Providence, R. I. Mr. Corydon heads this new company as president; John V. Lizars is vice-president and manager of the New York office (331 Fourth Ave.); and Jonathan A. Chaffee, Jr., is secretary and treasurer. The company will make hypo-feeders, chlorinators, ammoniators, and solution feeders for all chemicals and uses. It will also render an engineering service in connection with proportioning problems.

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An outstanding new product of Chem-Feeds, Inc., is the "Hi-Speed, Midget Size Var-I-Feeder" for emergency main sterilization, or any other chlorination usage. It is characterized by extreme portability; the complete outfit—including protective case, test kits and accessories—measures only 10 x 18 x 14 inches and weighs 44 lbs.

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Transparent illuminated reagent head. The optical characteristics of plastic and a small electric bulb imbedded in the reagent head provide illuminated visibility of the apparatus inside. This enables the operator to clearly view the reagent, the diaphragm, and the check valve action and to be sure there is no entrained air in the pumping element.

This equipment may be driven by motor (only 1/20 hp), by gas engine, or from any belt connection to available R.P.M.

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While Var-I-Feeder is precision built, it is protected by a sturdy case intended for rough handling. This case stacks readily and safely, an important advantage for military distribution centers which may store dozens of units in warehouses ready for quick procurement by field men.

Tracing Underground Pipe Service

A sensitive and accurate M-Scope, manufactured by the Fisher Research Laboratory, Palo Alto, Calif., is finding increasing popularity among municipalities for the tracing of buried pipe in cable systems. Operating on an established radio principle, it locates the exact position of these pipes without the necessity of extensive digging.

The instrument consists of two units—a transmitter and a receiver. The transmitter sends out a continuous signal varying in intensity as the meter passes over metal objects.

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THIS is more than a war of mechanical monsters clashing in the night . . . more than a war of production.

It is a war for markets—*your* markets! The Axis wants your business—wants to destroy it for once and all.

With so much at stake, there is no doubt you will want to do everything you can to meet this Axis threat. Two ways are open: Speed production and BUY BONDS. The only answer to enemy tanks and planes is *more* American tanks and planes—and your regular, month-by-month purchases of Defense Bonds will help supply them. Buy now *and keep buying.*

HOW THE PAY-ROLL SAVINGS PLAN HELPS

When you install the Pay-Roll Savings Plan (approved by organized labor), you not only perform a service for your country but for your *employees.* Simple to install, the Plan provides for regular purchases of Defense Bonds through voluntary pay roll allotments.

Write for details *today!* Treasury Department, Section R, 709 Twelfth Street, NW., Washington, D. C.

U. S. SAVINGS
Bonds ★ Stamps

This space is a contribution to Victory by
THE AMERICAN CITY

M. W. Babb Dies—Allis-Chalmers President

Max W. Babb, chairman of the board of the Allis-Chalmers Mfg. Co., Milwaukee, Wis., died March 13 in Milwaukee after an illness of several weeks. Mr. Babb, who had been board chairman since January, 1942 and for 10 years prior to that, the company's president, was 68 years old.

He became the attorney for the Allis-Chalmers organization in 1904. He formerly had practiced law in Iowa after receiving his law degree from the University of Michigan in 1897.

In 1913 Mr. Babb was made vice-president and general attorney of Allis-Chalmers, and was closely associated with the late General Otto H. Falk in the management of the concern. He succeeded Gen. Falk as president in 1932 when Falk became chairman of the board.

Care of Paint Brushes Made of War Substitutes

New instructions in the care of paint, varnish, and lacquer brushes, now being manufactured from war-created substitutes, have been released by The Osborn Mfg. Co., 5301 Hamilton Ave., Cleveland, Ohio, in a booklet entitled "Care and Conservation of Brushes."

Because many sea lanes are closed, inferior substitutes such as horsehair and substitute cements must be used. Under the war emergency program, brushes are made with only 55 per cent of the customary hog bristle, which gives the paint brush manufactured prior to the war its wearing quality and ability to stand up under rough treatment.

Some of the suggestions in the booklet for preserving brushes are:

Never pound, daub, or force the brush into corners or other narrow places.

Never use a brush edgewise.

Never submerge the entire length of the bristles into the paint.

Never use a large, flat brush when working on pipes or other round surfaces.

Paint only with the flag end of the brush.

Use a small brush for a small or narrow surface and a large brush for a large surface.

Use a worn brush for the first and second coats on rough surfaces; never a new one.

Kerosene is an enemy of the brush.

Placing a paint brush in water before or after using is wrong and harmful.

To soak a brush in turpentine, suspend it in the liquid. The brush loses its shape when left standing on the bristles.

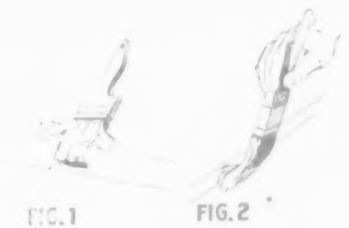


FIG. 1

FIG. 2

FIG. 3

FIG. 4

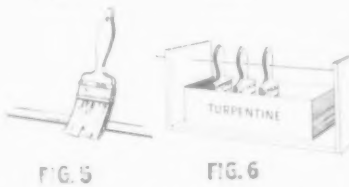


FIG. 5

FIG. 6

Fig. 1—Never pound, daub, or force the brush into corners or other narrow places as shown.

Fig. 2—Never use brush edgewise.

Fig. 3—Never submerge the entire length of the bristle into the paint.

Fig. 4—Never use a large, flat brush when working on pipes or other round surfaces in this manner.

Fig. 5—When working on pipes or other round surfaces use brush in this manner.

Fig. 6—Hang the brushes in the turpentine. Never let them stand on the bristles.

It s the inside wedging mechanism of a Mueller-Columbian Gate Valve opened out to show its construction It shows how the side spreaders (being free to adjust themselves) act as equalizers between the top and bottom wedges and applies the force equally to four points near the OUTER EDGE of the discs instead of in the center with the obvious tendency to spring the discs and cause a sticking and leaky valve

This is an exclusive feature found only in Mueller-Columbian Valves It is used in all Mueller Gate Valves and is one very good reason why Mueller-Columbian Gate Valves have a reputation among water works men for dependable service and extremely low maintenance cost Write us for complete information

MUELLER CO.
CHATTANOOGA, TENN.

NON-CLOGGING
FOR SEWAGE SERVICE

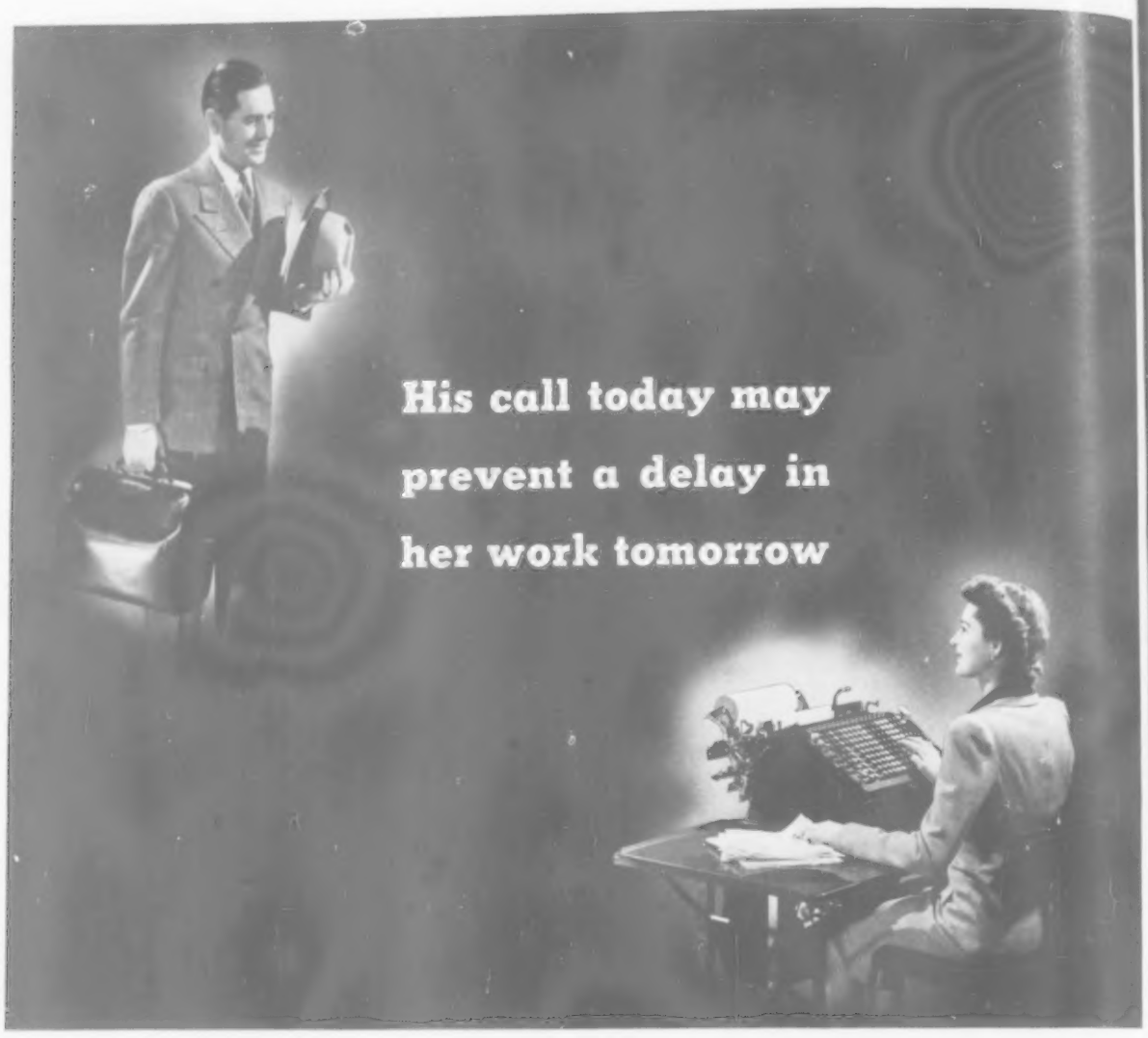
The impellers of these Morris non-clogging Sewage Pumps have such "thoroughfare" passageways that, for example, an 8-inch wooden ball will pass completely through a 10-inch pump of this type. These pumps are built both horizontal and vertical, and for operation by standard-speed motors.

Bulletin on request

Morris Machine Works
Baldwinsville New York

MORRIS
CENTRIFUGAL PUMPS
for municipal services

INCINERATION ENGINEERS
NICHOLS ENGINEERING & RESEARCH CORPORATION
60 WALL TOWER NEW YORK, N. Y.
Consultants • Designers • Constructors



MANUFACTURING FOR WAR

Manufacture of aircraft equipment for the Army Air Forces, and the manufacture of Burroughs figuring and accounting equipment for the Army, Navy, U. S. Government and the nation's many war activities, are the vitally important tasks assigned to Burroughs in the Victory Program.

An ounce of prevention is still worth a pound of cure—especially these days when time and manpower are at a premium. A phone call will bring a Burroughs service man when you need him, but it's far wiser to arrange with Burroughs for periodic inspection, lubrication and adjustment of your Burroughs machines, so that emergencies, and the delays they entail, may be prevented. The Burroughs service man is the best answer to the ever-mounting problem: "How can I get the most out of my present machines, and make them last for the duration?" He is factory trained and factory controlled, and makes replacements with genuine Burroughs parts. His work is guaranteed by Burroughs. For full details, call the local Burroughs office.

BUY YOUR SUPPLIES FROM BURROUGHS—Users of all types of office machines find that Burroughs ribbons, carbon paper, roll paper and other supplies cost no more—assure better, more uniform results.

BURROUGHS ADDING MACHINE COMPANY · DETROIT, MICHIGAN

Burroughs

ADDING, CALCULATING, ACCOUNTING, STATISTICAL, PAYROLL AND BILLING MACHINES

How the flagstaff now looks over the American Cast Iron Pipe Company's factory at Birmingham.

Acipco Gets Army-Navy "E" Award

Employees of the American Cast Iron Pipe Co., Birmingham, were awarded the Army-Navy "E" for excellence in production in a significant ceremony on March 24 at Birmingham, Ala. They were notified of the award on February 20 by Robert P. Patterson, Under Secretary of War. The award was formally presented by Col. Ernest C. Bomar, District Chief, Birmingham Ordnance District; and accepted by W. D. Moore, President of the company. Lt. Commander Edwin Phillips, Commander of the Naval Training School, Auburn, Ala., presented the award of pins to the employees.

John Vaughn, Norwood Executive, Dies

John J. Vaughn, 56, vice-president of the Norwood Engineering Co., Florence, Mass., died suddenly on March 19 at Northampton, Mass.

During the past several years Mr. Vaughn has been head of the filtration department at Norwood, and was responsible for a substantial portion of mechanical and architectural designing in the water-works field. He was also a former president of the Northampton Board of Water Commissioners.

Mr. Vaughn's active business career was spent with Norwood, having started with the company in 1906 as a blueprint boy, and subsequently working up to assistant draftsman, draftsman, chief draftsman, and finally vice-president and head of the filtration department.

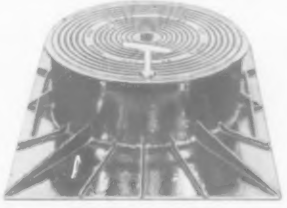
Autocar Company Delivers Report

Charles R. Stevenson of New York was elected to the board of directors of the Autocar Company, Ardmore, Pa., by the stockholders at their annual meeting here today. He succeeds W. W. Colpitts, of New York, who had resigned. In addition, Harold R. Baxter, of Philadelphia, was elected to the board, increasing the number from 11 to 12. All other directors were reelected.

Among the interesting features of the annual report, prepared by Robert D. Page, Jr., Autocar president, was the one that after this company got into standardized production on some of its war contracts early last year, the management found that some contingencies for which they had provided in their competitive bids had not developed and that, further, they had been able to cut costs greatly in many other ways. As a result, the company gave the government a voluntary reduction of $800 per vehicle and also a large percentage off the original price for spare parts. Later on in the year the government's process of renegotiation was applied to all Autocar profits on war work, before taxes, with the resulting withdrawal of $3,971,500. That sum is to be returned to the government when, and if, it is actually formalized by the federal authorities.

In the summer of 1942, the Autocar Company was given an order to produce an experimental secret weapon. A number of those weapons accompanied the American forces that were sent to North Africa. Recently, the Autocar organization was gratified to receive a confidential telegram from Major General Campbell, Chief of Ordnance, telling in some detail of its effectiveness against the enemy.

FORD
METER
PIT COVER



This Pit Cover is for a rectangular pit 2 ft. by 3 ft. Extension Plates are available to adapt it to pits measuring 3 ft. by 4 ft., and 3 ft. by 6 ft. The Pit Cover is 7" in depth, has a 20" lid opening and can be provided with an inner lid. —it makes a most satisfactory housing for large meters.

Write for Catalog.

FORD METER BOX CO.,
WABASH, IND.

ARE YOU PREPARED FOR WAR'S INCREASED FIRE HAZARDS?

VALVES
HYDRANTS
and
PIPE LINE
ACCESSORIES

A.W.W.A. HYDRANTS

Underwriters Approved

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

M & H Fire Hydrants are dry top and revolving head. They are easy to lubricate. Maintenance costs are low because of simplicity of design and rugged construction. They have low friction loss and great efficiency because barrel diameter is not reduced and there are no working parts or obstruction in waterway. Special Traffic model is designed to yield at the ground line under impact. Repair is simple and easy by renewing breakable bolts and breakable coupling on stem.

M&H VALVE
AND FITTINGS COMPANY
ANNISTON, ALABAMA

HOW TO MAINTAIN ROADS FOR WARTIME TRAFFIC With Calcium Chloride

1st

TREAT ONLY NECESSARY ROADS

Gravel roads that are primarily used for peace-time tourist traffic are off the list this year. But those that carry farm produce to market, war workers to their jobs, and materials to the production lines are more vital than ever and must give smooth, safe, all-weather service.

2nd

APPLY EARLY IN SEASON

Since the binding action of calcium chloride is due to moisture retention, it is common sense to apply the material while natural moisture from spring rains is still in the road. This early treatment increases the effectiveness of calcium chloride and stops loss of road materials before it can start.

3rd

SPREAD ENOUGH TO BE EFFECTIVE

The soil composition of the road, its location, and the prevailing humidities should govern the number of applications and the total quantity of calcium chloride applied during any given season. The best rule is to make the treatments whenever signs of dryness or disintegration appear in the road surface.

FULL DETAILS IN BULLETIN NO. 29

This up-to-the-minute manual contains 62 pages of information that will help you maintain gravel roads with a minimum of labor, equipment and materials. Highly illustrated with photographs, charts and useful tables. Write for it today!

CALCIUM CHLORIDE ASSOCIATION, 4145 PENOBSCOT BLDG., DETROIT, MICH.

G. A. Bassett, left, president of Gar Wood Industries; and Ralph S. Jenkins, vice-president and general manager, examine a power take-off gear.

War Developments of Gar Wood Industries

Although Gar Wood Industries, Inc., Detroit, Mich., has been rendering continuous service for more than a quarter of a century along lines familiar to both the municipal and construction fields, it was one of the first to convert its various plants into total war production.

Ralph S. Jenkins, vice-president and general manager, states that the products now being produced include such items as gun mounts, truck and tractor mounted cranes and winches, troop and cargo bodies, mobile machine shop bodies, and many other items directly related to war or war construction.

"Plan facilities have been greatly developed," states Mr. Jenkins. "X-Ray facilities have been included to make radiographs for the checking and inspection of weldments, forgings, and castings used on products going to the armed services.

The metallurgical laboratory has been developed for analyzing non-ferrous metals and steel. The tool shop has been enlarged and expanded by the acquisition of additional machines. Operators' schools have been established and have been training large groups of formerly unskilled men as production machine operators.

"Constant improvements in tooling and production methods," Mr. Jenkins emphasizes, "are receiving daily consideration by the management and are pointing the way to new production records for 1943."

Tamper-proof Street Washer

The value of the Murdock "Lock-Lid," street washer, developed by The Murdock Mfg. Supply Co., 426 Plum St., Cincinnati, Ohio, approximately five years ago, can be attested to by its popularity. In recent years this type of street washer has been installed in the parks in Washington, D. C., at other parks, and at several Army camps throughout the United States. They were selected after rigorous tests comparing them with other similar devices.

The Murdock "Lock-Lid" street washer was developed to offset tampering and water wastage by vandals and children who were able to get at the operating parts of earlier-designed street washers. The "lock" is a simple, sturdy device consisting of a can attached to the lock which rides up on an inclined portion of the street washer plate until it comes to a point where it cannot be moved further. The lock is opened and closed with the same key that operates the street washer, thus avoiding the possibility of the lock being lost.

The manufacturer reports that this "lock-lid" feature has been so designed that older washers may be converted by the interchange of essential parts. The washers are used for sprinkling purposes in parks, playgrounds, golf courses, boulevards, cemeteries, and large homes.

Johnston & Jennings Acquire Rusta-Restor

The Johnston & Jennings Co., 877 Addison Road, Cleveland, Ohio, has recently become the sole licensee, under Rusta-Restor patents, of the Rusta Restor Corporation, according to an announcement made by H. H. Fleming, vice-president. This company states that its greater facilities will enable it to render even better services than those previously offered by the original corporation.

Mr. A. B. MacTaggart will head the Rusta-Restor Division as manager. Mr. Fleming states that it is not the company's intention to make any immediate or drastic changes, but rather to effect improvements gradually.

O K CHAMPION

SEWER CLEANERS

PROMPT DELIVERY — While the manufacture of material for the Armed Forces has slowed deliveries of our Power Model Sewer Cleaners, we build two sizes of hand-operated OK Champions that are ready for immediate shipment.

LOW COST—The OK Champion Junior and Standard Sewer Cleaners are nominally priced. The smallest towns and villages are now keeping their sewerage systems in 100% operating capacity with OK Champions.

Ask for Literature

Champion Corporation

1711 Sheffield Ave. Hammond, Ind.

Once . . . . an economy and a convenience

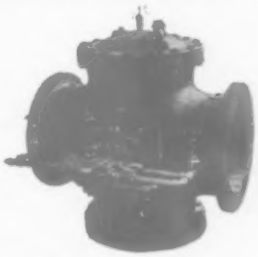
Now . . . . a wartime necessity

Ross Automatic Valves

Surge Relief Valves—

Protect **distribution systems against excessive pressures.**

Prevent **over-drafting of a deep well by supplying constant back-pressure.**



Altitude Valves—
Single or double-acting

Prevent **overflow of tanks, standpipe or reservoirs.**

Retain **supply on off-peak loads. Make storage available for peak load periods.**

Control **head during filtering operations.**

Reducing Valves—

Regulate **pressures in either gravity or direct pressure systems.**

Regulate **fire-flows between zones of unequal pressure.**

Regulate **pressure in filter waste lines.**

No distribution system is better than the valves that control it.

Write for literature, catalogs, and details to fit your particular system.

ROSS VALVE MFG. CO., Inc.

P. O. BOX 596 TROY, N. Y.

The EDDY Valve

The Eddy Valve has a number of distinctive features which it will pay you to study. For example, the gates are free to revolve on the trunnions, so as not always to seat in the same position.

Write us for further details.

Also manufacturers of the well-known Eddy Hydrant

EDDY VALVE COMPANY

WATERFORD — NEW YORK

Representatives

Jas. B. Clow & Sons, Chicago, Ill.

National Cast Iron Pipe Co., Birmingham, Ala.

SAVE WITH HEIL M-1

street sanitation and garbage collection equipment

Let us help you plan now for bigger loads, faster operation, more efficient performance after the war. Write for complete details today.

Heil Conveyor Sanitation Unit — Heil Enclosed Garbage Dump Unit

THE HEIL CO.

GENERAL OFFICES • MILWAUKEE, WIS.

WANTED: TRAINED ADMINISTRATORS

☆ Cities all over the country are losing some of their top administrators to the federal and state governments and to defense industries. Unless there are trained replacements for these key men, city governments will be seriously crippled. If you are a department head, you owe it to your city to train an "understudy" for your job. If you are a junior administrator, now is the time to prepare for advancement.

Enroll now in one of these nine practical correspondence courses:

- Technique of Municipal Administration
- Municipal Finance Administration
- Municipal Police Administration
- Municipal Recreation Administration
- Local Welfare Administration
- Municipal Personnel Administration
- Municipal Public Works Administration
- Municipal Fire Administration
- Local Planning Administration

☆ Special texts have been prepared for administrators on the job. Lesson papers are reviewed by leading authorities in each field. The $35 fee for each course covers the text, individualized lesson instruction, and a certificate upon satisfactory completion of the work. The text alone sells for $7.50 a copy—$60 for a complete set. For use in group training projects, in lots of five or more, the price is $6 a copy.

There are now nearly 800 public officials enrolled in these courses in nearly 300 cities in 44 states.

WRITE FOR A SPECIAL CIRCULAR TODAY

THE INTERNATIONAL CITY MANAGERS' ASSOCIATION

1313 EAST 60TH STREET — CHICAGO

HOTEL PHILADELPHIAN

FORMERLY HOTEL PENNSYLVANIA

DANIEL CRAWFORD, Jr., Manager

39th and CHESTNUT STREETS

PHILADELPHIA, PENNA.

Our courteous and competent staff will give you the utmost in friendliness, comfort and service. Conveniently located to all stations, and only five minutes away from the heart of the business section.

600 ROOMS each with bath from $2.50 up

Lounge and Restaurants. Unrestricted Parking to 3 a.m.

You've done your bit -- Now do your best!

BUY WAR BONDS

D. C. Barrick, Co-Founder of Union Metal, Dies

Donald C. Barrick, one of the founders of The Union Metal Mfg. Co., Canton, Ohio, died March 9 at Lakeside Hospital, Cleveland. He was 59 years old.

D. C. Barrick

Mr. Barrick had been associated with this company almost continuously since he and his father, C. C. Barrick, founded it in the fall of 1906. He served for a number of years as its secretary and treasurer, and was also a member of its sales staff.

Responsible for many outstanding street lighting installations throughout the country, and well known to municipal and utility officials, he saw the organization, which he helped establish, grow from five employees to approximately 1,100.

He lived in Ohio practically all his life and received his college education at Ohio Northern University. He is survived by his wife, brother, sister, a daughter and one grandchild.

Spun Concrete Lighting Standards

The mechanics of manufacturing centrifugally cast street lighting standards, as well as various types of lighting installations, are explained in a new catalog "Hy-Lite Standards for Street and Highway Lighting" just published by the American Concrete Corp., 4727 North Lamon Ave., Chicago.

According to the manufacturer, Hy-Lite standards are made by the "Spun-Crete" process. In this process a welded steel reinforcement cage is first bolted into a watertight, rigid, metal mold. Each individual rod is placed in tension, and the molds tightly bolted and filled with a designed mixture of Portland cement, crushed granite or marble, or both. Centrifugal casting produces a concrete of maximum density and high strength. The surface has the color and texture of natural black and white marble. Special features include economy of installation, minimum maintenance, attractive appearance and wide variety of designs.

New Fireman's Helmet

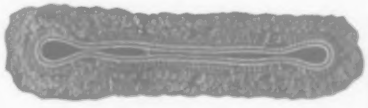
A new streamlined fireman's helmet has been developed by Mine Safety Appliances Co., Pittsburgh, Pa. Known as the Streamlined M.S.A. Fireman's Helmet, it features wide, arched side brims, long sweeping rear brim, reinforced crown ridge, and laminated bakelite construction.

The smoothly arched brim carries off water and shields against heat. Correct brim width affords protection, yet permits the carrying of materials on the wearer's shoulders. The helmet is non-conductive to electricity and will not soften or deteriorate from exposure to water or common chemicals. Heat cannot warp or twist it out of shape. The reinforcing crown ridge deflects falling objects and adds to the great natural strength of the helmet's laminated bakelite construction. A soft, rubber-cushioned leather sweatband and adjustable crown hammock act as effective shock-absorbers to take the force of blows on the helmet and make the hat comfortable to wear.

The standard helmet color is black, but red or white finishes are also available.

The new MSA fire helmet.

WHY—



The above illustration shows the position of the rubber lining in

Bi-Lateral Fire Hose

when it is held in a flattened position between calls into service. This is why we can save a city one replacement, because the hose will give double the service of any hose constructed under the old method.

— Also —

We can load 25% more on the apparatus-bed, actually making an $8,000 truck loaded with the Bi-Lateral construction, cheaper than one priced at $7,000 when loaded with other construction.

BI-LATERAL FIRE HOSE CO.

20 N. Wacker Drive, Chicago, Illinois

89 years
of progressive storage tank engineering!
Established in 1854, the R. D. Cole Mfg. Co. has long been recognized as one of the nation's outstanding tank builders. With 89 years of "progressive storage tank experience" at your disposal, we shall welcome the opportunity to serve your tank needs.

All shapes and sizes

We have developed a complete line of elevated steel tanks for water supply, both for domestic service, and sprinkler requirements, ranging in capacity from 5,000 to 2,000,000 gallons. The designs include the standard Hemi-spherical and Self-supporting bottom, the "Cole Ovaloid," Standpipe, and many individual styles.

Storage Tanks

We also make pressure tanks for storage of gas from digestors at sewage disposal plants so that excess output at peak loads can be used during off-peak periods. Also chemical storage tanks, hot water storage tanks, tanks for bulk storage of oils and gas.

Write for "Tank Talk" — No. 15A

R.D. COLE MFG. CO.

Established in 1854

NEWNAN · · · GEORGIA

Official Photograph, U. S. Army Force

MILITARY Police cover a lot more territory when they're mounted on rugged, powerful motorcycles. And like traffic officers in more than 3600 American cities that have purchased Harley-Davidsons, the M. P.'s have learned through experience that the built-in stamina and rugged dependability of Harley-Davidson Motorcycles assure long, trouble-free performance under severest conditions of service.

In the days of peace ahead, lessons learned on world-wide battle fronts will assure still better Harley-Davidson Police Motorcycles for traffic and law enforcement departments.

HARLEY-DAVIDSON MOTOR CO., Milwaukee, Wisconsin

The new selector switch for airport runway lighting.

Controlling Lights on Airport Runways

For the control of airport runway lighting, a new line of switches has been developed by Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa. These include both runway selector switches and brightness selectors.

The runway selector switch is designed for the selective control of the runway contact lights and floodlights. It is mechanically interlocked with present switches wired to permit the operation of contact lights along any runway, any group of floodlights, or a combination of floodlights and corresponding runway contact lights as desired. Where switches are mounted on facsimile maps showing the actual runway layout, the switch handle can be oriented with the map and will point to the actual direction of the plane landing or take-off.

The brightness selector switch is a five-position switch for selection of five stages of brilliancy of the runway contact lights.

Toro Manufacturing Officer Changes

J. S. Clapper, president of the Toro Manufacturing Corp., 3042 Snelling Ave., Minneapolis, Minn., since 1914, has recently retired from this position and has been elected chairman of the Board of Directors.

H. C. McCartney, secretary-treasurer, has been named president and will continue to serve as treasurer.

K. E. Goit, sales and advertising manager, will perform the work of secretary along with his other duties.

Art Knoerzer Dies Suddenly

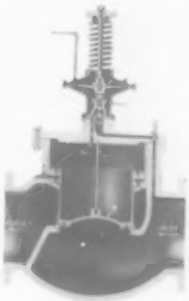
Arthur T. Knoerzer, 45, life-long resident of Hammond, Ind.; vice-president, general manager and treasurer of the Champion Corporation, 4714 Sheffield Ave., Hammond, Ind., manufacturers of the well-known line of Champion potato machinery, irrigation equipment, and sanitary sewer cleaners, died of a heart attack while returning to his home after delivering an address before the Speakers' Forum in Chicago.

Surviving Mr. Knoerzer are his wife, Jayne; five-year-old twin daughters, Jayne and Joan, and a sister, Mrs. Herbert Bieker. He was the son of the Leonard Knoerzer who passed away six years ago. Mr. Leonard Knoerzer was secretary-treasurer and also one of the co-founders of the Champion Corporation.

On the day of Mr. Arthur Knoerzer's death, he had just completed a new, single-unit, sanitary sewer cleaning machine which was to have been tried out the following day. This machine has subsequently been put into service and is giving an excellent performance without the need for a single change, indicating the thoroughness with which the machine has been planned, and the great amount of forethought given to it.

Mr. Knoerzer has been identified with the Champion Corp. for twenty years and of late has been responsible for many of the improvements and new designs in the complete line of production of the corporation. He was also very active in a good many of the Farm Equipment Institute activities, being a member of the Advisory Council, and was a familiar figure at its annual convention and at a good many of the outstanding potato industry and municipal gatherings.

His passing is keenly felt by his associates and required some readjustment in Champion Corporation personnel to cope with problems of design and steady improvement of their products. However, this has been accomplished and business is going on as usual.



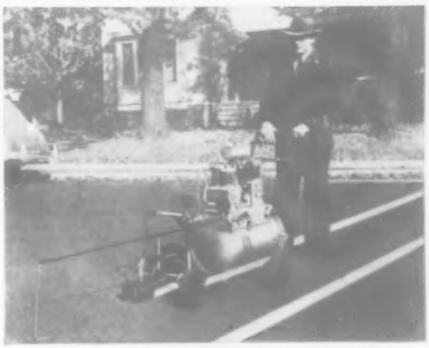
STOP CHECK SINGLE-ACTING ALTITUDE VALVE

★

This valve installed in the upstream line automatically maintains a uniform water level within 3" to 12" variation to prevent any tank overflow; also by means of the internal "stop check" piston assembly, prevents loss or return of storage water back through the valve—making the valve very desirable for use where metered water is purchased, or wherever it is imperative that there be no possible return flow.
This valve may be fitted with "Differential" Control for delayed opening, if desired.
Write for Specifications

GOLDEN-ANDERSON VALVE SPECIALTY CO.
Fulton Building Pittsburgh, Pa.

In baseball parlance, "Safe at Home" means another run scored. But the phrase has even greater significance in cities harboring thousands of pedestrians.



M-B Marker striping a crosswalk in a midwest city.

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WRITE FOR BULLETIN NO. 112

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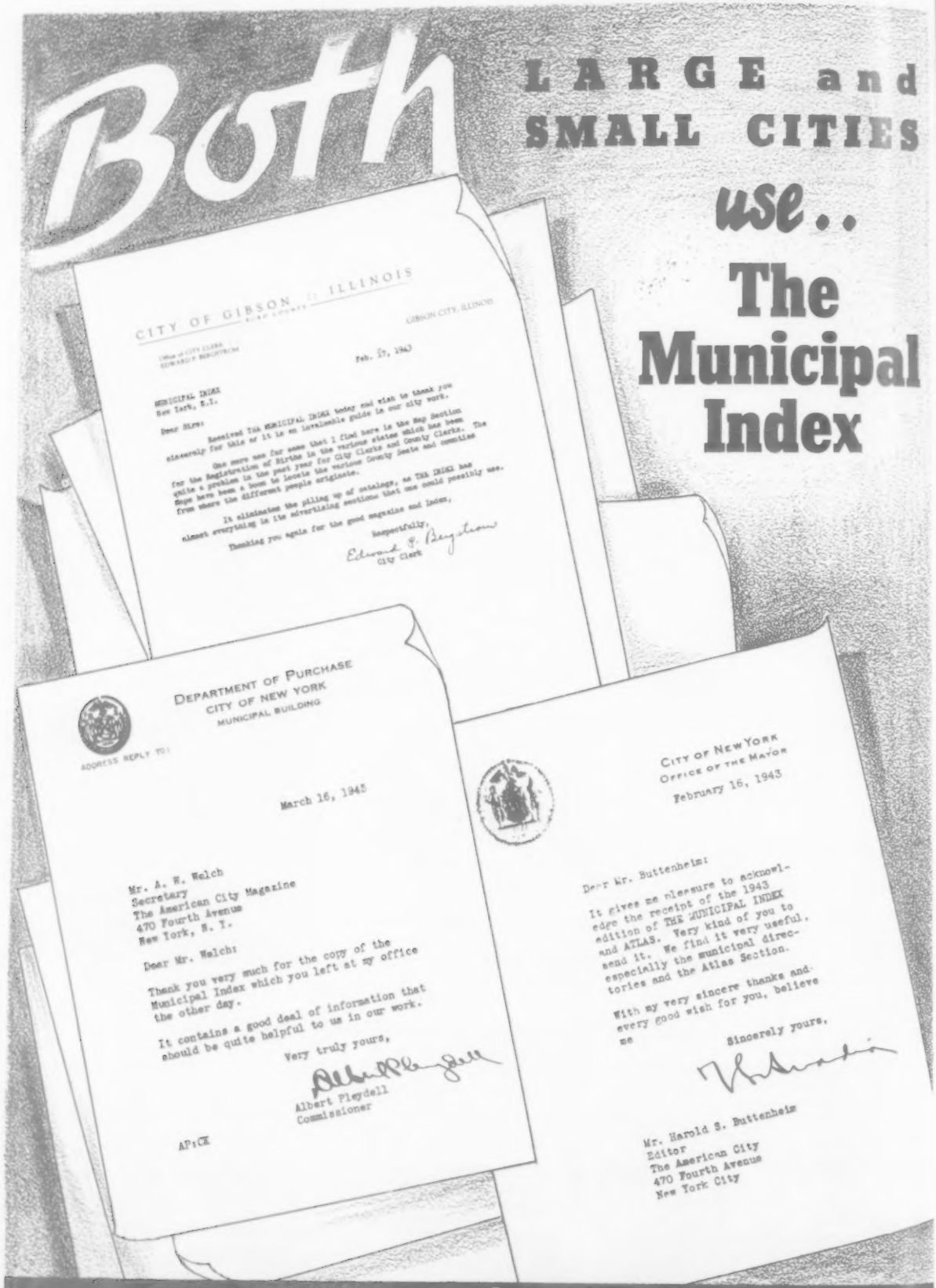
MB STREET MARKERS


Both
LARGE and SMALL CITIES
use..
The Municipal Index
CITY OF GIBSON ILLINOIS
GIBSON CITY, ILLINOIS
Feb. 27, 1943
MUNICIPAL INDEX
New York, N.Y.
Dear Sirs:
Received THE MUNICIPAL INDEX today and wish to thank you sincerely for this as it is an invaluable guide in our city work.
One more use for same that I find here in the Map Section for the Registration of Births in the various states which has been quite a problem in the past year for City Clerks and County Clerks. The maps here been a boon to locate the various County Seats and counties from where the different people originate.
It eliminates the piling up of catalogs, as THE INDEX has almost everything in its advertising sections that one could possibly use.
Thanking you again for the good magazine and index,
Respectfully,
Edward F. Berglstrom
City Clerk
DEPARTMENT OF PURCHASE
CITY OF NEW YORK
MUNICIPAL BUILDING
ADDRESS REPLY TO:
March 16, 1943
Mr. A. H. Welch
Secretary
The American City Magazine
470 Fourth Avenue
New York, N. Y.
Dear Mr. Welch:
Thank you very much for the copy of the Municipal Index which you left at my office the other day.
It contains a good deal of information that should be quite helpful to us in our work.
Very truly yours,
Albert Pleydell
Commissioner
AP:CK
CITY OF NEW YORK
OFFICE OF THE MAYOR
February 16, 1943
Dear Mr. Buttenheim:
It gives me pleasure to acknowledge the receipt of the 1943 edition of THE MUNICIPAL INDEX and ATLAS. Very kind of you to send it. We find it very useful, especially the municipal directories and the Atlas Section.
With my very sincere thanks and every good wish for you, believe me
Sincerely yours,
Mr. Harold S. Buttenheim
Editor
The American City
470 Fourth Avenue
New York City
THE MUNICIPAL INDEX is published yearly by
AMERICAN CITY MAGAZINE CORPORATION, 470 FOURTH AVENUE, NEW YORK

A hoist for reservoir gates

Floor Stand Hoists for Screw Stem Gates

The Rodney Hunt Machine Co., Orange, Mass., has recently designed a completely new line of floor stand hoists for screw stem gates such as are used on reservoirs and other water controlling projects. The new types are unusually compact, strong, and easy to operate. They include the use of hardened gears, efficient seals, and compact anti-friction bearings. The handles are removable. The floor stands have selective two-speed gear ratios which permit the gates to be stopped and held at any stage of opening.

New Sweeping Compound Has Safety Features

Fibre-Tex is the name of a new floor cleaning compound which is said by its manufacturer to eliminate the danger of fire usually inherent in materials sold for this purpose.

The product, manufactured by the Lacey-Webber Co., Kalamazoo, Mich., is said not to burn even when the flame of a blowtorch is played directly upon it, nor as the result of spontaneous combustion.

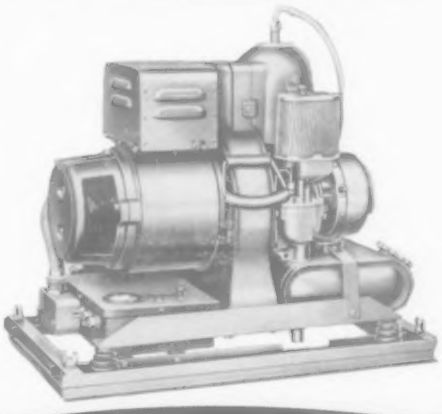
It is also claimed for Fibre-Tex that it is highly absorbent of oils and grease and has an active cleaning effect upon floors on which it is consistently applied. Grease and oil-caked dirt are said to be removed; safety stripes and other floor markings made plainer; and, in general, plant housekeeping greatly improved.

Jones Enters Public Health Service

Frank Woodbury Jones, partner in the firm of Havens and Emerson, Leader Bldg., Cleveland, Ohio, Engineers, has been appointed Sanitarian in the Reserve, United States Public Health Service, according to a recent announcement. Mr. Jones has been appointed to duties as Regional Sanitary Engineer, Fifth Area, Office of Civilian Defense.

For Getting the Job Done Faster

HOMELITE



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But the big job now is to meet the greatest emergency of all time . . . *the war.* Therefore, all new Homelite Generators must go to the Armed Forces . . . to help our Air Force, Tank and Signal Corps do their jobs better and faster.

To meet the requirements of our fighting forces, many improvements have been added to Homelite Portable Generators. Our new models are more powerful, more rugged, and more able to operate under all conditions than ever before. And because of this they'll be far more valuable to you who will get them after the war.

The quality of Homelite Portable Generators — now produced in huge quantities — has earned the high Army-Navy production award. After the war, we'll produce as well for you.

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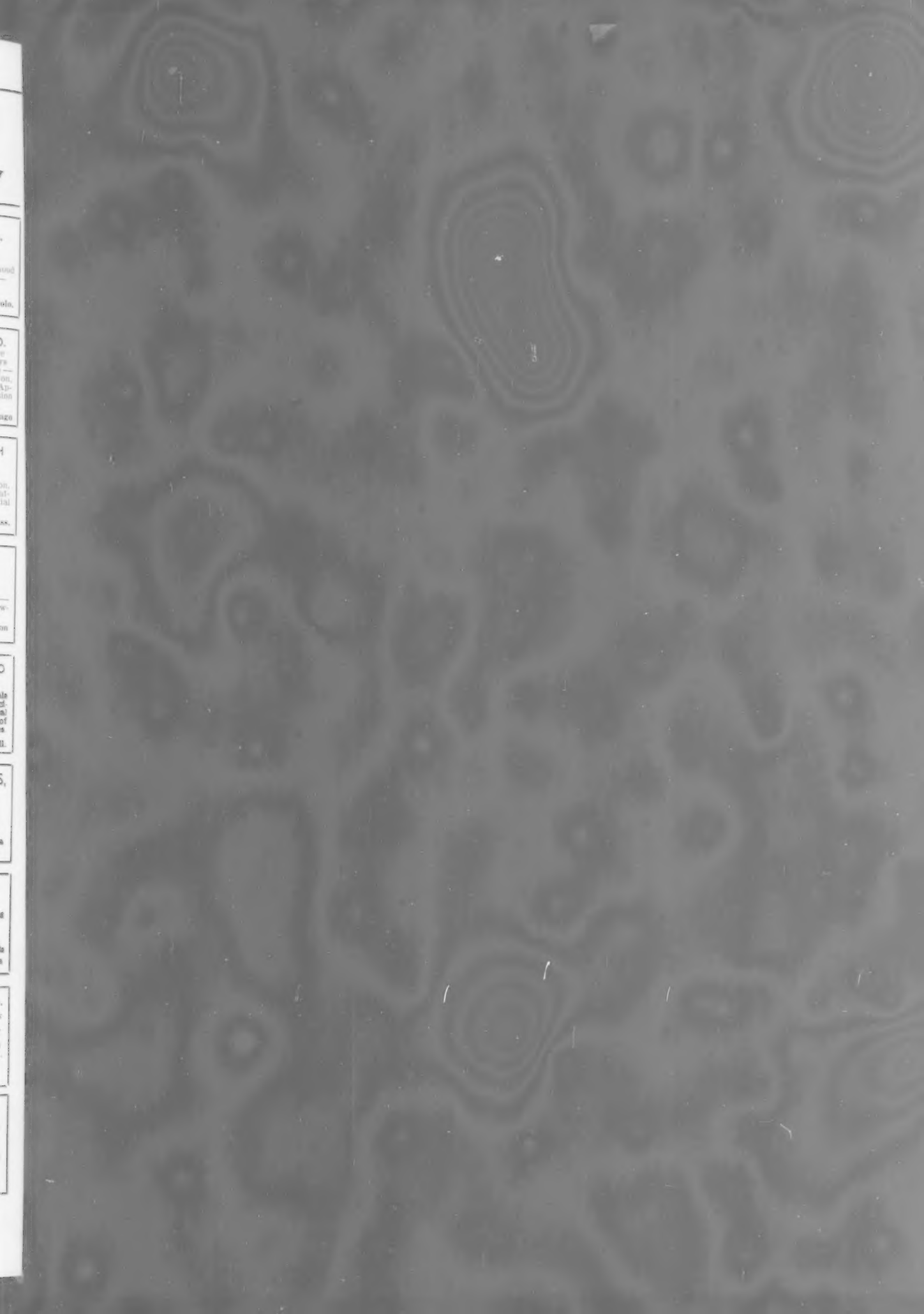

JUNE, 1943

JUN 18 1943

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The American City

Plans *vs.* Hunches

By Major-General Philip B. Fleming

Administrator, Federal Works Agency

As we prepare to face the post-war future, there is grave danger that we may mistake mere paper proposals, vague ideas, pretty pictures, and hunches for plans.

No city, in my opinion, can honestly say that it has a *plan* for post-war rehabilitation unless it has taken steps to acquire sites for at least the most urgently-needed public works, has under way the advance engineering surveys, and is at work on the specifications and working drawings. The mere *intention* to modernize the water works and enlarge the sewage treatment plant is inadequate. Good intentions alone build no public improvements and pave but one well-known road.

Some cities are now tackling these preliminaries with intelligence and courage, but too many others are content to speculate rather than plan, and indifferently excuse their inertia by saying that they will ". . . wait and see what the Federal Government may do."

No one now knows how much aid from the Federal Government will be available after the war. But as we learned in the old PWA program, no Federal agency can act quickly and intelligently until it knows what is intended and desired.

Careful preparation pays for itself by eliminating the waste that inevitably results when projects are hastily improvised. Its expense may be compared to the cost of carrying insurance to protect against possible future need. I do not consider myself defrauded of my premiums simply because my house has not yet burned down.

We shall have one day a wealth of labor, skill, and materials waiting to be converted from war to works of peace. We should be prepared to utilize them promptly for the common good.

We may need them sooner than you think.